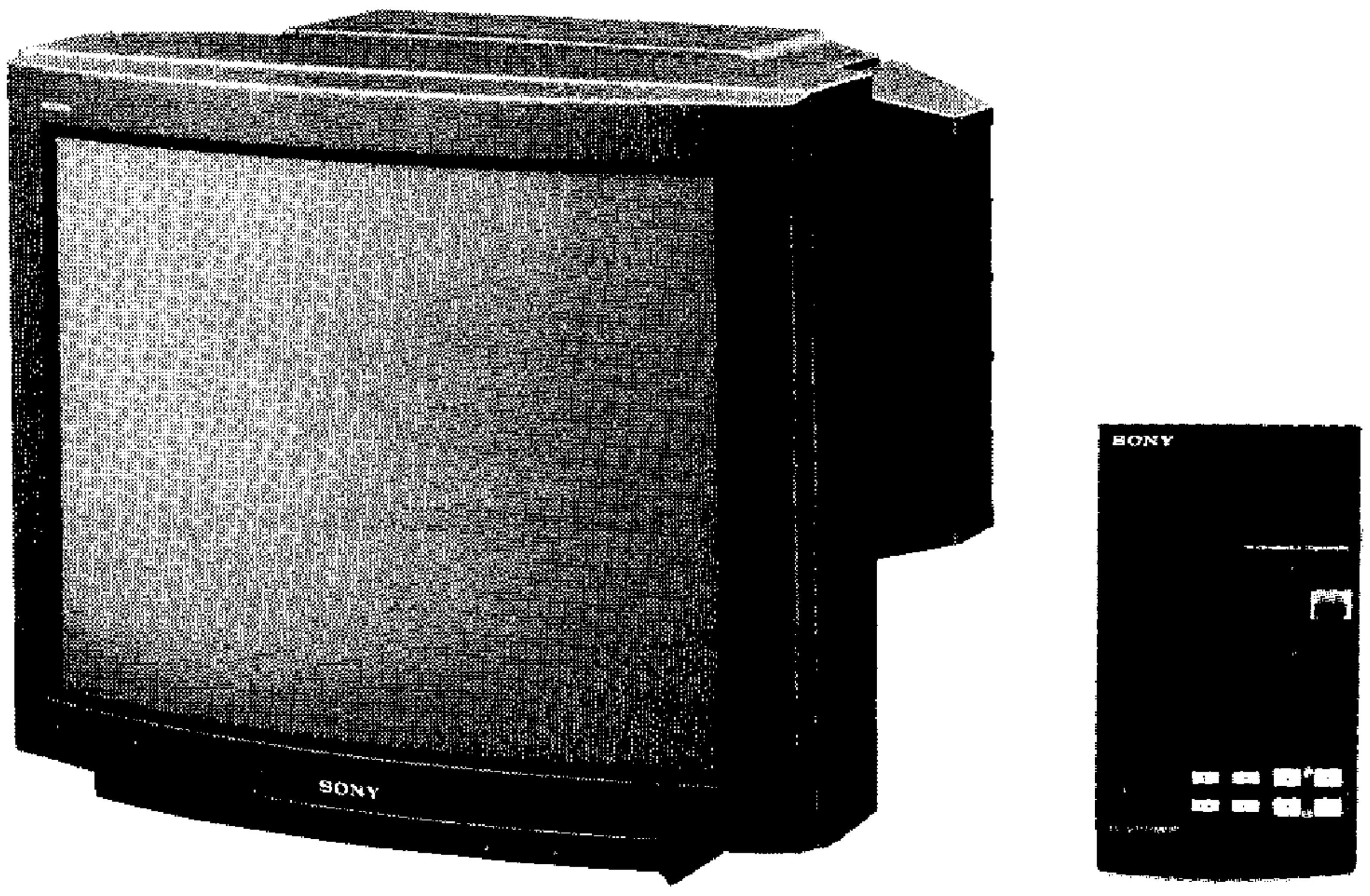
KV-D3431D
RM-811

SERVICE MANUAL

AEP Model
Chassis No. SCC-D93A-A



DE-2 CHASSIS

MODELS OF THE SAME SERIES	
KV-D3431D	KV-D3431A
KV-D3431B	KV-D3431E

SPECIFICATIONS

Television system	B/G/H
Color system	PAL, SECAM, NTSC3.58, NTSC4.43
Stereo system	German stereo
Channel coverage	VHF : E2-E12 UHF : E21-E69 CABLE : S1-S41
Picture tube	Trinitron tube Approx. 86 cm (34 inches) (Approx. 80 cm picture measured diagonally 110°-degree deflection)
Inputs	⊖ 1 21-pin connector : CENELEC standard including RGB input. ⊖ 2 21-pin connector : including S video input ⊖ 3 Video, Audio : phono jack. 4-Pin S. video input connector Audio input jacks : phono jack

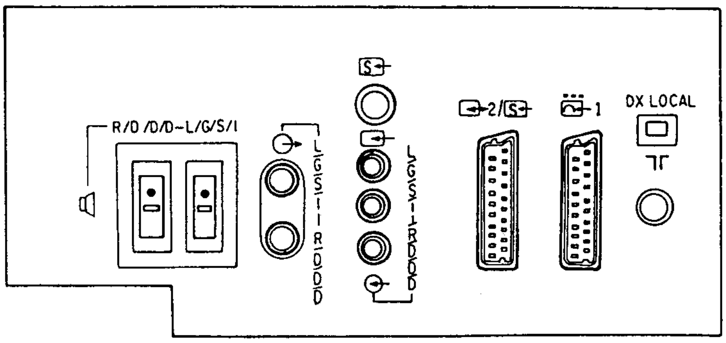
Outputs	21--pin connector : CENELEC standard Headphones jack : stereo minijack External speaker terminals : 2-pin DIN Audio output jacks : phono jack (output dependent upon TV settings)
Sound output	40 W + 40 W
Power consumption	153 Wh
Dimensions	Approx. 778x660x580 mm (w/h/d)
Weight	Approx. 73.0 kg
Supplied accessories	RM-811 Remote Commander (1) IEC designation R6 batteries (2)

Design and specifications are subject to change without notice.

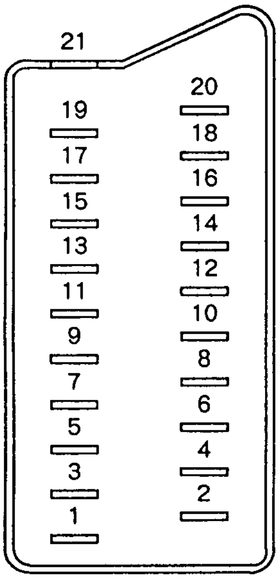
MICROFILM

TRINITRON® COLOR TV

SONY®



21 pin connector (⊖-1, ⊖-2)



Pin No	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level : 0.5Vrms Output impedance : Less than 1kohm*
2	○	○	Audio input B (right)	Standard level : 0.5Vrms Input impedance : More than 10kohms*
3	○	○	Audio output A (left)	Standard level : 0.5Vrms Output impedance : Less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio input A (left)	Standard level : 0.5Vrms Input impedance : More than 10kohms*
7	○	●	Blue input	0.7V±3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5−12 V) : Part mode Low state (0−2 V) : TV mode Input impedance : More than 10kohms Input capacitance : Less than 2 nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal : 0.7V±3dB, 75ohms, positve
12	○	○	Open	
13	○	○	Ground (red)	
14	○	○	Ground (blanking)	
15	○	−	Red input	0.7V±3dB, 75ohms, positive
	−	○	(S signal) croma input	0.3V±3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1−3 V) Low state (0−0.4 V) Input impedance : 75ohmes
17	○	○	Ground (video output)	
18	○	○	Ground (video input)	
19	○	○	Video output	1V±3dB, 75ohms, positive Sync : 0.3V (−3, +10dB)
20	○	−	Video input	1 V±3dB, 75ohms, positive Sync : 0.3V (−3, +10dB)
	−	○	Video input/Y (S signal)	1 V±3dB, 75ohms, positive Sync : 0.3V (−3, +10dB)
21	○	○	Common ground (plug, shield)	

○ connected ● unconnected (open) * at 20 Hz−20 kHz

4 pin connector (S⊖)

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V±3dB 75ohm, positive Sync 0.3V $^{-3}_{+10}$ dB
4	C (S signal) input	0.3V± 3dB 75ohm positive

TABLE OF CONTENTS

Section Title Page

1. GENERAL
  1-1. Index of the Command Elements ······ 4
  1-2. Supplementary Functions ······ 6
  1-3. Basic Functions ······ 6
  1-4. Special Function ······ 7
  1-5. Intelligent Remote Control ······ 9
  1-6. Teletext ······ 10

2. DISASSEMBLY
  2-1. Rear Cover Removal ······ 11
  2-2. J Board Removal ······ 11
  2-3. Chassis Assy Removal ······ 11
  2-4. A Board Removal ······ 12
  2-5. P, B and V Boards Removal ······ 12
  2-6. Service Position ······ 12
  2-7. Picture Tube Removal ······ 13

3. SET-UP ADJUSTMENTS
  3-1. Beam Landing ······ 14
  3-2. Convergence ······ 15
  3-3. Focus ······ 17
  3-4. White Balance ······ 17

Section Title Page

4. CIRCUIT ADJUSTMENTS
  4-1. A Board Adjustment ······ 18
  4-2. B Board Adjustments ······ 18
  4-3. D Board Adjustments ······ 19
  4-4. P Board Adjustments ······ 20
  4-5. V Board Adjustments ······ 21

5. DIAGRAMS
  5-1. Block Diagram (1) ······ 23
  Block Diagram (2) ······ 26
  Block Diagram (3) ······ 31
  5-2. Circuit Boards Location ······ 36
  5-3. Schematic Diagrams and Printed Wiring Boards ······ 37
  5-4. Semiconductors ······ 78

6. EXPLODED VIEWS
  6-1. Chassis ······ 80
  6-2. Picture Tube ······ 81
  6-3. Speaker ······ 82

7. ELECTRICAL PARTS LIST ······ 83

REMOTE COMANDER RM-811
  Exploded view ······ 106

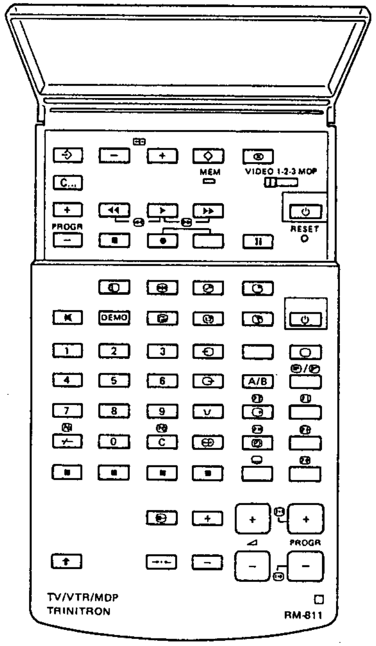
SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
GENERAL

For a quick reading

1-1. INDEX OF THE COMMAND ELEMENTS



a) Remote control keys

Under the cover

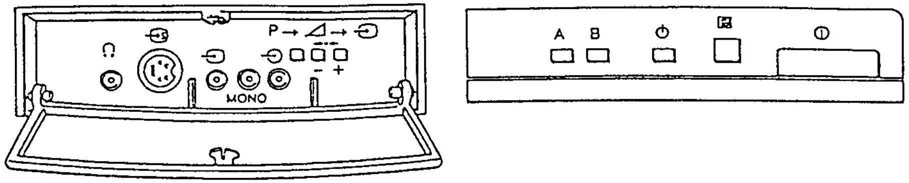
Symbol	Function
-◇	Program key
⊞+ / −	Programming: FF and REW search keys
◇	Programming: Memory key
⦿	Programming: TV norm, no function on this unit
C...	Programming: zero adjustment, set the search unit at the beginning of the VHF frequency band
MEM	"Intelligent" remote control: memory/function indication
VIDEO 1/2/3 MDP	"Intelligent" remote control: commutator for supplementary units
PROGR + / −	"Intelligent" remote control: program change of the video/MDP unit
◀◀, ▶, ▶▶, ■, ●, II, ⏻ keys	"Intelligent" remote control: function keys for video/MDP unit
RESET	"Intelligent" remote control: cancelling of the memorized functions

Basic functions

Symbol	Function
◐	Image-in-the-image: program index, switches all the non-cancelled index program places and all the data sequentially.
↑+◐	Image-in-the-image: program index, switches the 4 small images memorized sequentially.
⊛	Image-in-the-image: "freezing" of the small image.
↑+⊛	Image-in-the-image: stroboscopic effect at 4 different speeds.
⊘	Image-in-the-image: switching of the big and the small image.
↑+⊘	Image-in-the-image: the respective switching of the image which follows the actual one takes place in various small images.
◔	Image-in-the-image: insertion of the image in the image. Only selectable up to 4 small images.
↑+◔	Image-in-the-image: size increase of the small image.
🔇	Activation/disactivation of the sound.
DEMO	A list of image-in-the-imagefunction is represented successively (only if you have not activated the image-in-the-imagefunction).
⊜	Image-in-the-image: the small images repeats successively 4 memorized images of the main image (only if the image-in-the-image function has not been activated).
⊕	Image-in-the-image: modification of the position of the small image/images.
↑+⊕	Image-in-the-image: modification of the colours of the frame of the small image.
⊗	Image-in-the-image: disactivation of the image in the image.
⏻	Brief disactivation of the unit (standby mode)
1, 2...9, 0, -/--	Number keys, program selection and disactivation of the standby mode of the unit; for those program numbers that consist of two positions, first press the -/-- key and then the number.
↑ + 1, 2...9, 0, -/--	Image-in-the-image: program selection of the small image.
⊖	Key for selecting the desired input.
↑+⊖	Image-in-the-image: selection of the desired image in the small image.
○	TV key: switches the unit from any operation mode to the TV mode.
⊖→	Key for selecting the output signals ⊖→2/⊖.
A/B	Bilingual transmission: for selecting the desired channel.
✓	Activation/disactivation of the tone adjustment (increase of treble and bass).
⊕	Insertion keys: for inserting information on the screen.
C	For the direct selection of the channel in the TV mode without using the memory function.
⊜	Activation/disactivation of the spacial sound setting.
◎	Hour key Activation/disactivation (only for having the televideo on the selected channel).
↑	Works only in combination with another key.
⊟+ / −	Image and sound adjustment.
→•←	Key for returning to the initial values of the image and sound settings.
◿+ / −	Volume up/down
PROGR + / −	Program selection forward/backward

The colour keys are destined for the televideo.

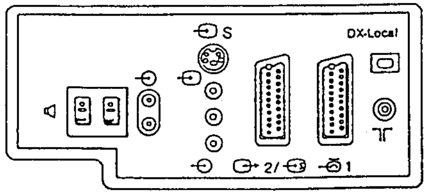
b) Keys and connections of the unit



Front vision of the unit

Symbol	Function
∩	Earphones jack
⊖S	Video S input jack
⊖	Video input (yellow)
⊖	Audio inputs (white and red)
P → ◁ → ⊖	Selection key P: Program switching ◁: Volume ⊖: Video input mode
− /+ key	Adjustment keys for the select key functions: − and + keys are pressed simultaneously: cancelling function for the image and sound adjustment.
A/B	Indications of two channels/stereo
⏻	Standby indicator
▣	Infrared remote control sensor
⏽	Power switch, activation/deactivation of the unit

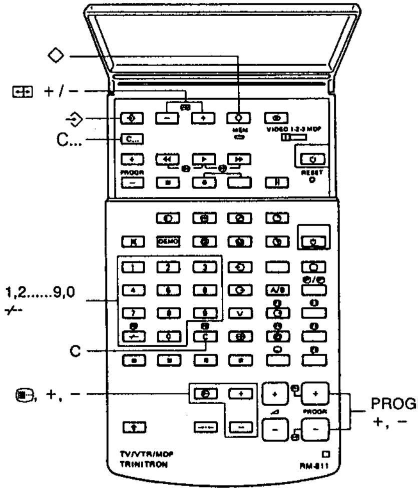
Rear vision of the unit



Symbol	Function
◁	Connection jacks for external loudspeakers.
⊖	Audio outputs (cinch jacks)
⊖S, ⊖, ⊖	Y/C input and video/audio input (cinch jacks)
⊖ 2/⊖S	21 pin EURO-AV connection (with Y/C input)
⊖ 1	21 pin EURO-AV connection (with RGB input)
DX/Local	Antenna attenuator
⊤	Antenna socket

Channel tuning

Use the remote control keys for tuning the channels. The remote control houses 60 programmable memory sections (00-59).



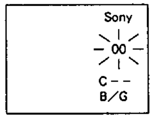
There are two ways in which to perform the adjustment:

a) Direct channel setting

The desired channel number is known and can be directly introduced.

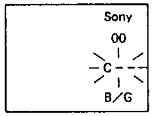
1) Turn the unit on using the power switch ⏽.

2) Press the program key -◇ . The program number will flash on the on-screen display.



3) Select the desired program place using the number keys or the PROGR + / − keys. As for program numbers that consist of two positions, first press the -/-- key and then the program number.

4) Press the C key. The "C" indicator will flash on the display together with two lines to indicate the channel number. Digit the two numbers of the desired channel using the number keys (e.g. 04 for channel 4). If the desired channel is a cable channel, press the C key twice. The "S" indicator will flash on the display together with two lines to indicate the channel number. Digit the channel number according to the previous description.



5) If the channel is to be memorized, press the memory key ◇. Now, the program number no longer flashes. Is the channel is not to be memorized, repeat the sequence from item 2.

6) Repeat the operation from item 2 if you want to memorize other channels.

b) Automatic channel search

The TV set automatically searches those channels that can be received in your area (in the case of cable channels, also the respective cable channels).

1) See "Direct channel setting".

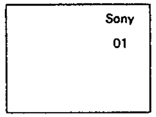
2) See "Direct channel setting".

3) See "Direct channel setting".

4) Activate the automatic search using the ⊞ + or − keys.
" + " to advance the number (higher frequencies)
" − " to decrease the number (lower frequencies)
Using the C key, the search system returns to the beginning of the VHF frequency band.

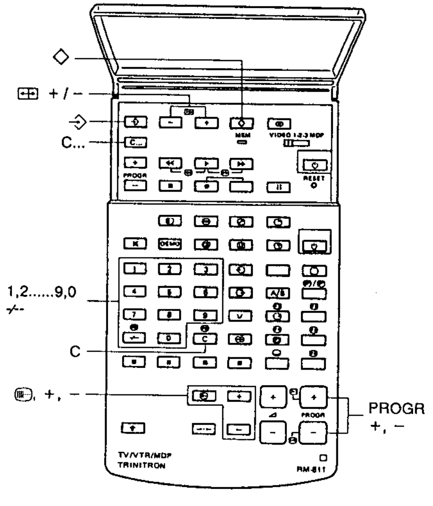
5) If you want to memorized the tuned channel, press the memory key ◇. If you do not wish to memorize the channel, repeat the memorizing operation from item 4.

6) If you want to memorize other channels, repeat the operation from item 2.



Note:
Press the -◇ key again to leave the programming mode without memorizing any channel.

1-2. SUPPLEMENTARY FUNCTIONS

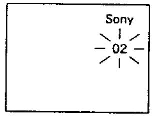


a) Individual assignation of the program name

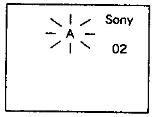
Your new Sony TV set offers you the possibility to assign individual names to the memorized programs. This name will appear in the top right corner of the screen for a short while every time that you turn the TV set on or when you change program.

1) Select the program to which you wish to assign a name, using the number keys.

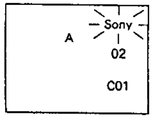
2) Press the program key ⟡.



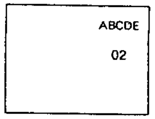
3) Press the ⊞ key.
Use the + or − key to select the first letter of the name (number or letter: 0-9, A-Z, − for empty space).



4) Press the ⊞ key again. The indication will skip to the next position, which is to be digited as the first one. In this way, you can set the five letters of the channel name.



5) Press the memory key ◇ to memorize the channel name.



b) Cancelling the undesired program positions

Thanks to the C key, your unit offers the possibility to cancel the program positions in which you have not memorized any channel during the passage with the PROGR keys.

1) Press the program key ⟡.

2) Select the program position that is to be cancelled using the number keys or the PROGR + / − keys.

3) Press the C key.

4) Press the memory key ◇ to leave the programming mode. The cancelled program positions can still be recalled using the number keys.

c) Manual fine tuning

If you have memorized a channel, the reception of which is not optimal, the automatic fine tuning might be disactivated. In this case, press the ⊞ − or + keys. If the channel is recalled again using the correct program number, the automatic fine tuning will start again.

d) Direct channel selection in the TV mode without memorizing the channels

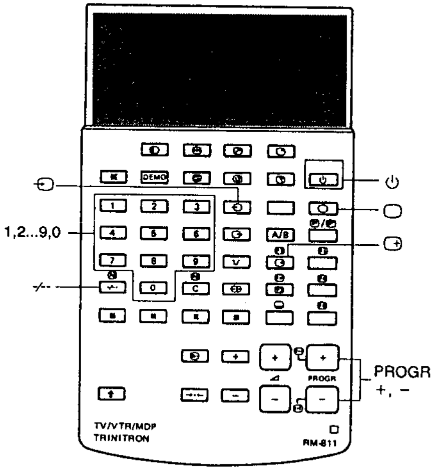
In the normal TV mode, you have the possibility of recalling other channels without memorizing them. The recalled channel will then be cancelled when you change program or when you turn the unit off.

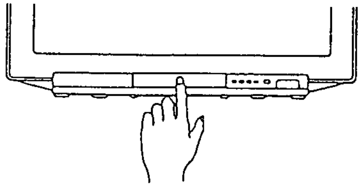
1) You are watching a TV program. If you want to select a channel directly, press the C key (for cable channels, press the key twice).

2) Digit the two figures of the channel number (e.g. 02 for channel 2).

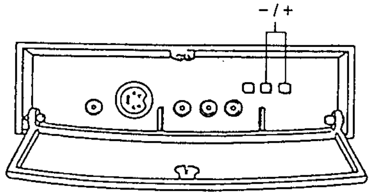
1-3. BASIC FUNCTIONS

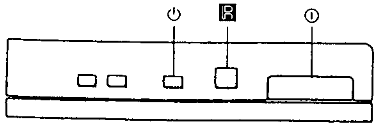
The remote control is the central control unit of your TV set, with which all the command functions are performed. The units contains a infrared sensor ▣ that receives the remote control signals. The most important functions can also be operated directly on the command section of the unit itself.





To open the cover, press the countersign with the arrow.





- **Activation and disactivation**
  Activate and disactivate the TV set pressing the power switch ① on the unit.

- **Standby mode**
  If you disactivate the unit for a short while only, you can do so using the standby key ⏻ of the remote control. The unit will then stay in the standby mode and you can activate the TV set pressing any number key or the TV ○ key. When the unit is in the standby mode, the ⏻ indicator will light on the unit.

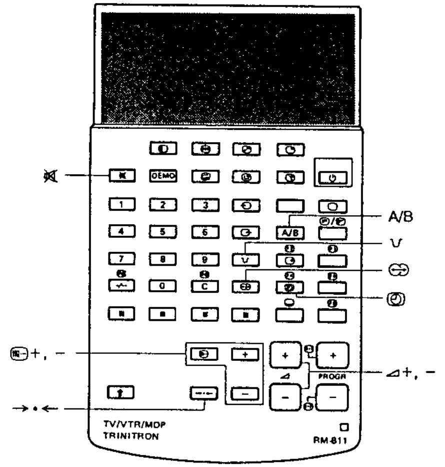
- **Program selection**
  a) Using the number keys 1, 2...9, 0.
  For selecting programs that consists of two numbers, first press the -/-- key and then the number keys.
  b) Using the program passage keys PROGR + / − .
  + : Higher program numbers
  − : Lower program numbers
  c) Using the panel of the unit itself.
  Press the program passage keys − / + .

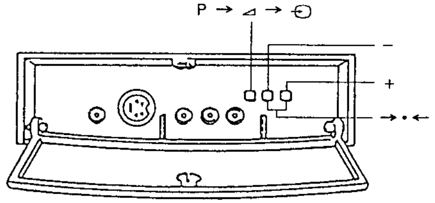
- **Informative indication on the screen**
  If you press the display key ⊕ , the various information indications will appear briefly on the screen. If you press the key again, the number and the name of the program will remain visualized on the screen until you press the key another two times.

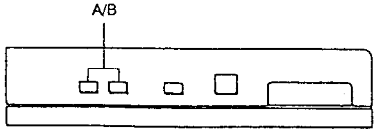
- **Switching of the signals of a connected**
  Unit press the ⊕ key on the remote control until you see the desired symbol appear on the screen:

⊕1, ⊕, ⊕2, ⊕2, ⊕3, ⊕3
└──── TV ────┘

In connection with this, see "Connection of other units".







- **Modification of the image and sound adjustments**
  The modifications will be visualized on a scale on the screen.

  Volume
  Using the + key ⊿, the sound will be recorded at a higher volume level. Using the − key ⊿, the sound will be recorded at a lower volume level.
  On the unit itself:
  Use the P key P → ⊿ → ⊕ to select the volume ⊿ and to memorized the desired volume level with the + / − keys.

  For all the other corrections of the image and sound
  Select the function that you wish to modify first with the ⊕ key: ◑ contrast, ✿ colour, ☼ brightness, ⊿ colour shade (for NTSC), 𝄢 bass, 𝄞 treble and ⊿ balance.
  Thereafter, record the desired value with the + or − key.
  If the normal values that have been memorized in the factory are to be cancelled, press the →•← key on the remote control and press the − and + keys on the unit simultaneously.

- **Sonic playback type**
  Stereo transmissions
  During the reception of stereo transmissions, the two indicators A/B will light on the unit.

  Transmissions that are broadcast over two channels
  For the reception of transmissions that are broadcast over two channels (when the transmission is broadcast in two languages), the desired channel can be selected using the A/B key on the remote control. In case you choose channel A (synchronisation), the A indicator will light on the unit, whereas if you choose channel B (original tone), the B indicator will light. The individual selection of the sound can also be performed while using the earphones or the videorecorder (with the A/V jacks).

  Spacial sound/tone adjustment
  Use the ⊖ key on the remote control to activate and disactivate the spacial sound (⊖ or ⊖ indication on the screen).
  Use the ∨ key on the remote control to activate and disactivate the tone adjustment (increase of bass and treble). (∨ or ∨ indication on the screen.)

- **Sound disactivation**
  Press the 🔇 key on the remote control to disactivate the sound of the TV set and reactivate it pressing the same key again.

- **Time indication**
  If televideo is broadcast on the selected channel, press the ◎ key on the remote control to visualize the time indication on the screen. Press the same key again to cancel the time indication.

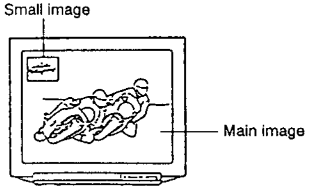
1-4. SPECIAL FUNCTION

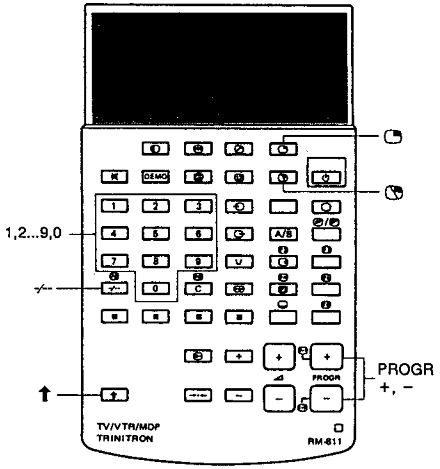
a) Image-in-the-image

With the image-in-the-image function, you have the possibility of inserting up to four small images in the image of the TV program so as to visualize other channels or video sources without switching the program.

- **Insertion and elimination of the small image**

  The small image will appear in the upper left corner of the screen.
  Press the ◔ key (you can choose four small images pressing the key repeatedly).
  Press the ◔ key to cancel the operation.



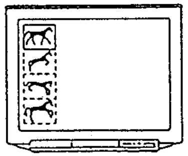


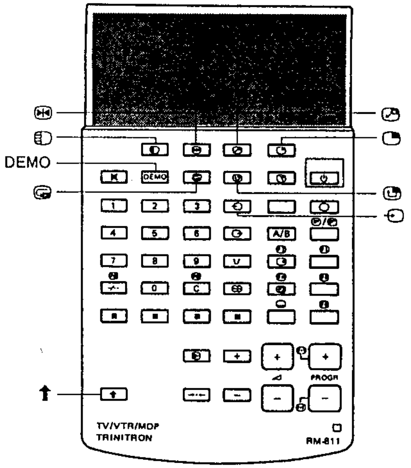
- **Program selection of the small image**

  a) Insert the small image.
  b) Press the ↑ key (the ↑ symbol will appear in the lower left corner of the screen). Select the desired program for the first small image using the number keys. Repeat the a) and b) operations for every other small image.
  c) Select the program with the number keys or the PROGR + / − key.

- **Programming of four small images**

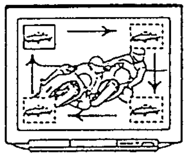
  Using the ◔ key you can insert up to four small images. The programs for the small images can be recorded in the following way:
  a) Press the ◔ key.
  b) Press the ↑ key (the ↑ symbol will appear in the lower left corner of the screen). Select the desired program for the first small image using the number keys. Repeat steps a) and b) for the other small images.



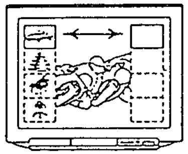


- **Modification of the position of the small image**

Select the position pressing the ◷ key. There are four possibilities for inserting a small image:

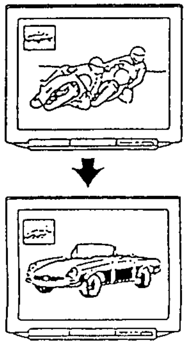


For many small images there are two positions possible.



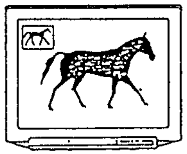
- **Substitution of the main image and of the small image**

a) Inserting the small image (◔ key).
b) Press the ◶ key.



- **Small fixed image**
  The small image is "frozen".
  a) Insert the small image (◔ key).
  b) Press the ⧓ key.
  Press the same key again to disactivate the function.

- **Sequence of fixed images**
  (only with the image-in-the-image function disactivated)



Four fixed memorized images will be repeated in the main image.
Press the ◵ key.
Press the same key again to disactivate the function.

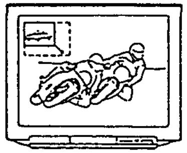
- **Program Index**
  All the program positions that have not been cancelled and all the video inputs will be connected sequentially.
  Press the ◫ key. Press the ◕ key to disactivate the function.

- **Program Index of the four small memorized images**
  The four memorized programs of the small image are automatically up-dated sequentially.
  a) Press the ↑ key.
  b) Press the ◫ key.
  c) Press the ◕ key to disactivate the function.

- **MEMO mode (only with the image-in-the-image function disactivated)**
  Press the DEMO key.
  Now, a selection of image-in-the-image function will appear automatically on the screen.
  Press the ◕ key to cancel the function.

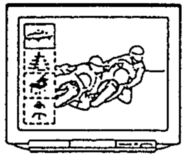
- **Increasing the size of the small image**

a) *Insert the small image.*
b) Press the ↑ key.
c) Press the ◔ key.
Repeat the operation from item b) to disactivate the function.



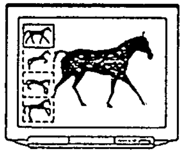
- **Updating of the small images**

To insert more small images, the updating can be performed as follows:
a) Press the ↑ key.
b) Press the ◶ key.
Now the following small image will be updated.



- **Stroboscopic effect**

With this effect, the movements of the small image can be represented in snapshots at four different speeds.
a) Insertion of the small image.
b) Press the ↑ key.
c) Press the ⧓ key.
Repeat the b) and c) operations until the desired stroboscopic speed is recorded. Press the ⧓ key to disactivate the function.



- **Control of an AV connection of the small image**
  a) Insert the small image (◔ key).
  b) Press the ↑ key.
  c) Press the ⊖ key.
  The last AV connection used will be inserted. For the selection of another input, repeat the b) and c) operations until the desired input is indicated. Press the ◕ key to disactivate the function.

- **Modification of the colour of the frame of the small image**
  a) Insert the small image (◔ key).
  b) Press the ↑ key.
  c) Press the ◴ key.
  Repeat points b) and c) until the desired colour appears on the frame.
  (Blue-black-white-yellow-cyan-green-pink-red)

1-5. INTELLIGENT REMOTE CONTROL

Using the remote control of your Sony unit, you have the possibility of controlling up to four audio and video units with the advantage that you can operate various units using one remote control.

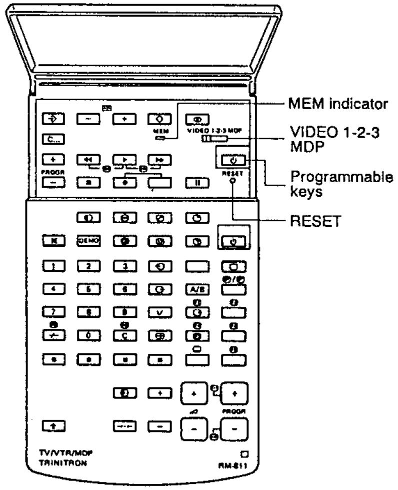
1) Usage of the Sony video tape recorders/video disc players

For the majority of the Sony video tape recorders/video disc players, you can use the remote control without programming the functions. Switch the VIDEO 1/2/3/MDP in the desired position to do so.

Video 1: Video tape recorder Sony 2 Betamax and Sony VHS FLV 202
Video 2: Video tape recorder Sony 8 mm
Video 3: Video tape recorder VHS Sony
MDP: Sony video disc player (also multiple video disc player)

After having selected the desired unit, you have the subsequent functions at your disposal:

◀◀	Fast backward
▶	Playback
▶▶	Fast forward
■	Stop
●	Recording
⏻	Activation/disactivation of the unit
II	Pause

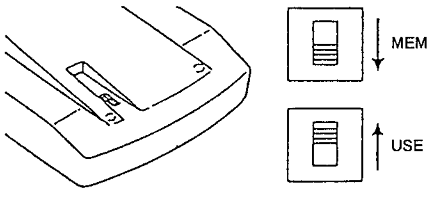


2) Controlling units of other brands

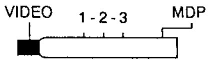
The remote control of your unit can memorize the functions of other remote controls. You can memorize one function on each of the programmable keys.

a) Switch the USE/MEM key to the MEM position (memorize).

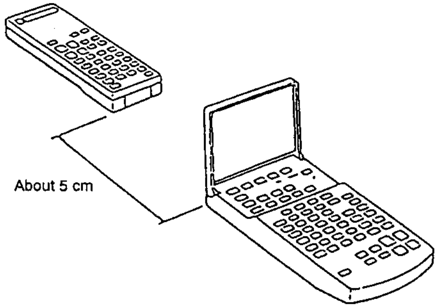
Rear vision



b) Switch the VIDEO 1/2/3/MDP switch to the desired position (independently of the type of the supplementary unit)



c) Put the remote control of the supplementary unit at a distance of about 5 cm from the remote control of the TV set. Do not move the remote controls during the programming.



d) Press the programmable key on which you wish to memorize the function and press simultaneously the key on the remote control of the supplementary unit containing the function to memorize. Press the keys until the MEM indicator turns off. If you have pressed a key, the function of which can be memorized, the MEM indication will flash eight times, after which it will turn off.

e) Repeat items 2 and 4 for each other function to memorize.

f) Switch the USE/MEM switch to the USE position (remote control).

Advice

- For products of other brands, switch the VIDEO 1/2/3/MDP to the position that is not used for the Sony units.
- For the usage of a supplementary unit, the VIDEO 1/2/3/MDP must be in the position in which it was during the memorizing.
- In order to facilitate the usage, the new functions are memorized on the relative keys on the remote control RM 811 (e.g. playback of the video tape recorder on the playback key ▶).
- You can also memorize functions of audio units.

Warnings

- If you change the batteries of the remote control, the functions will stay memorized for about 30 minutes.
- After the memorization, control the memorized function, since it might happen with units of other brands that some of the functions are not accepted.
- If the memory is full, the MEM indicator will light.

Cancellation of the memorized functions

1) Switch the USE/MEM switch to the MEM position.

2) Switch the VIDEO 1/2/3/MDP to the position of the desired unit.

3) Press the RESET key with a pointed object (e.g. a ballpoint pen). Now, all the functions are cancelled. The MEM indicator will illuminate briefly, after which it will turn off. The functions which control the supplementary Sony units will still remain memorized.

1-6. TELETEXT

Your Sony TV set has been equipped with a decoder for televideo signals. The keys have been countersigned in green on the remote control. Televideo is an information service which is furnished without any charge from the TV companies. In order to switch the televideo reception to another channel, you must first return to the TV mode and select another channel.

Recalling the televideo

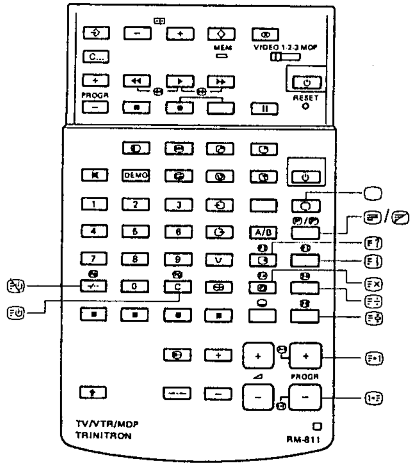
- Select the desired channel using the number keys.
- Press the ⊜/⊘ key.
  If the televideo is broadcast, the index page will be visualized on the screen. If not, the indication P100 will appear in the upper corner of the screen. Press the ⊜/⊘ again to insert the TV image in the background added to the televideo image.

Returning to the TV mode

Press the ○ key to exit from the televideo mode and to return to the normal TV mode.

- **Selecting the pages**

Digit the three figures of the desired page using the number keys. If you were to make an erroneous sequence, complete the three figures of the number and then digit the correct number. Now, the page counter of the televideo will search the page until it is found, after which the page will be visualized on the screen.



- **Selection of nearby pages**

Nearby pages can be quickly selected with the ⊡ key (return one page) and the ⊡ key (return one page).

- **Return to the index page**

Using the ⊡ key, the index page (contents index) can be recalled without digiting the figures.

- **Inserting the TV image**

During the televideo mode, there is the possibility of switching to the TV image while the system searches a selected page. In this even, press the ⊠ key. Once the page has been found, the page will be visualized on the left side of the screen. Press the ⊜/⊘ key to return to the televideo mode.

Double size text

Press the ⊡ key. Now, the upper half of the text will be doubled in size. Press the same key again to double the lower half of the text and press it a third time to return the text to its normal size.

Stopping the automatic change of the page

If a page of televideo is composed of several subpages, the change of the page can be avoided in the subsequent manner: press the ⊡ key. The symbol ⊡ will be visualized in the upper left corner of the screen. If you press the key twice, the inferior pages will be substituted again.

Recalling the subpages

A subpage can be recalled directly. Select the page with the subpages. Press the ⊡ key. Use the number keys to select the desired subpage consisting of four figures (e.g. digit 0001). If there is a subpage present, it will be visualized on the screen.

Recalling a programmed page

(Selecting a televideo page in a particular moment)

1) Select the televideo page with a time code (not accessible for all televideo services).

2) Press the ⊡ key.

3) Digit the four figures of the desired time using the number keys (e.g. 2030). Press the ⊠ key to return to the TV program.

At the selected time, the number of the page will be visualized on the screen in the upper left corner and the page can be recalled with the ⊜/⊘ key.

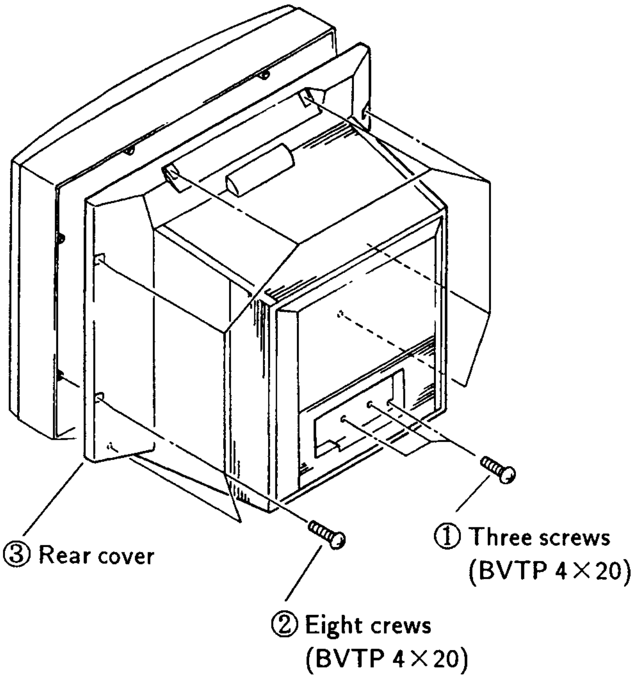
If the programmation is to be cancelled, recall the page again and press the ⊡ key.

Visualizing hidden information (e.g. for quiz games)

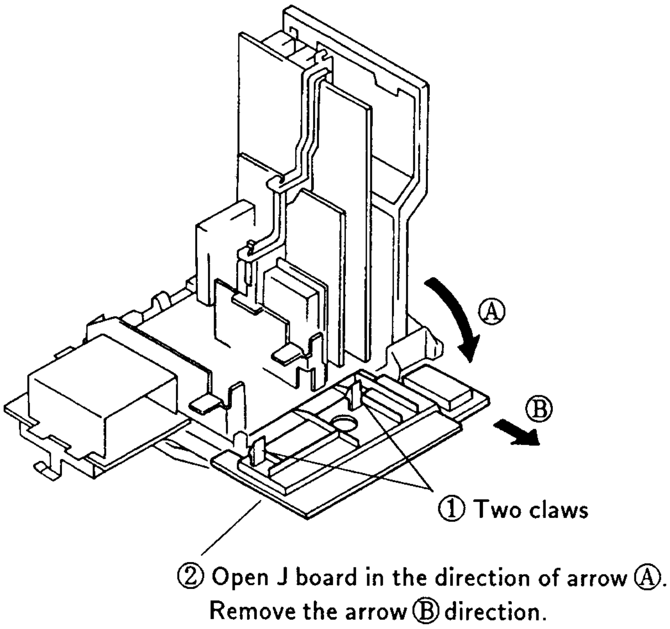
Press the ⊡ key. Press the key again, to cancel the hidden information.

SECTION 2
DISASSEMBLY

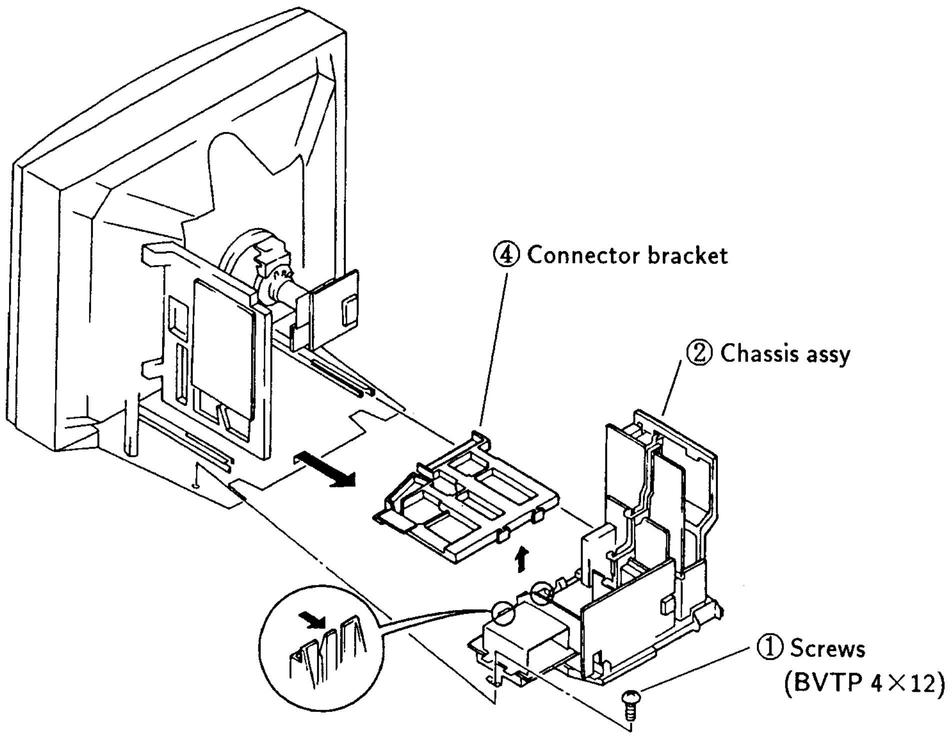
2-1. REAR COVER REMOVAL


③ Rear cover
① Three screws
(BVTP 4×20)
② Eight crews
(BVTP 4×20)

2-2. J BOARD REMOVAL

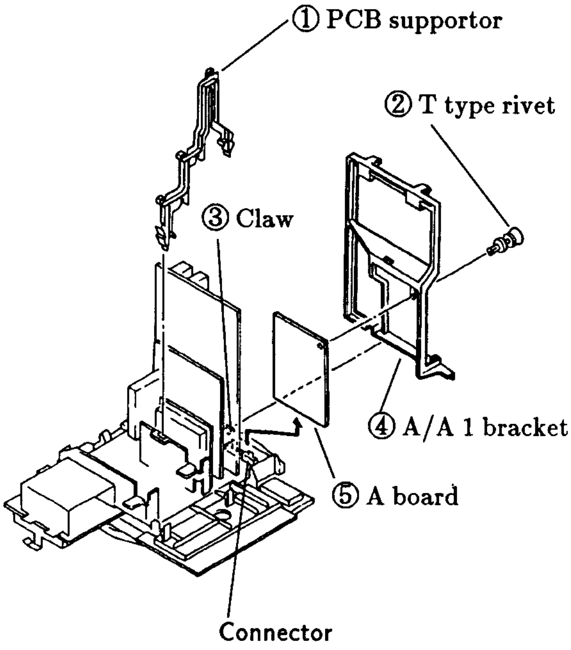

Ⓐ
Ⓑ
① Two claws
② Open J board in the direction of arrow Ⓐ.
Remove the arrow Ⓑ direction.

2-3. CHASSIS ASSY REMOVAL

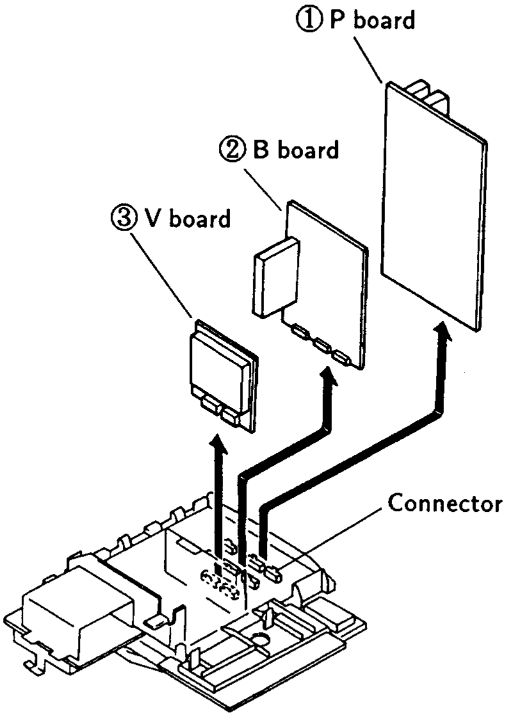

④ Connector bracket
② Chassis assy
① Screws
(BVTP 4×12)

③ Push two claws of the chassis assy in the direction of arrow and remove the connector bracket.

2-4. A BOARD REMOVAL

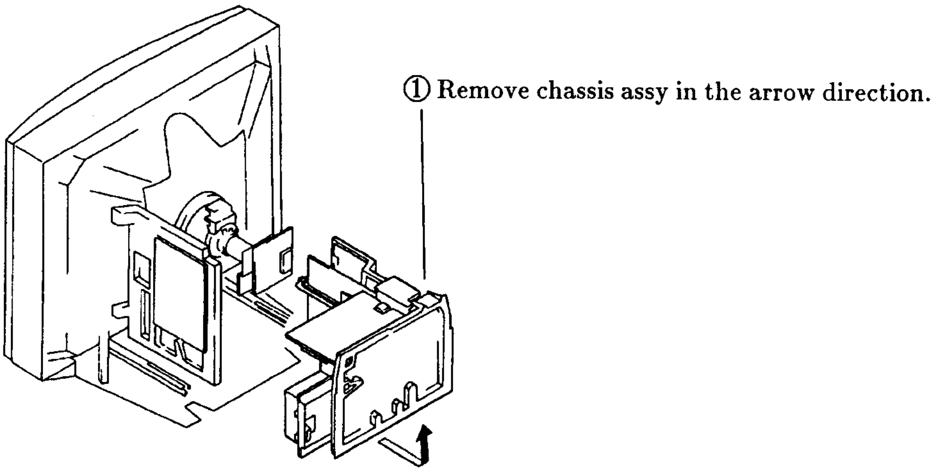

① PCB supportor
② T type rivet
③ Claw
④ A/A 1 bracket
⑤ A board
Connector

2-5. P,B AND V BOARDS REMOVAL

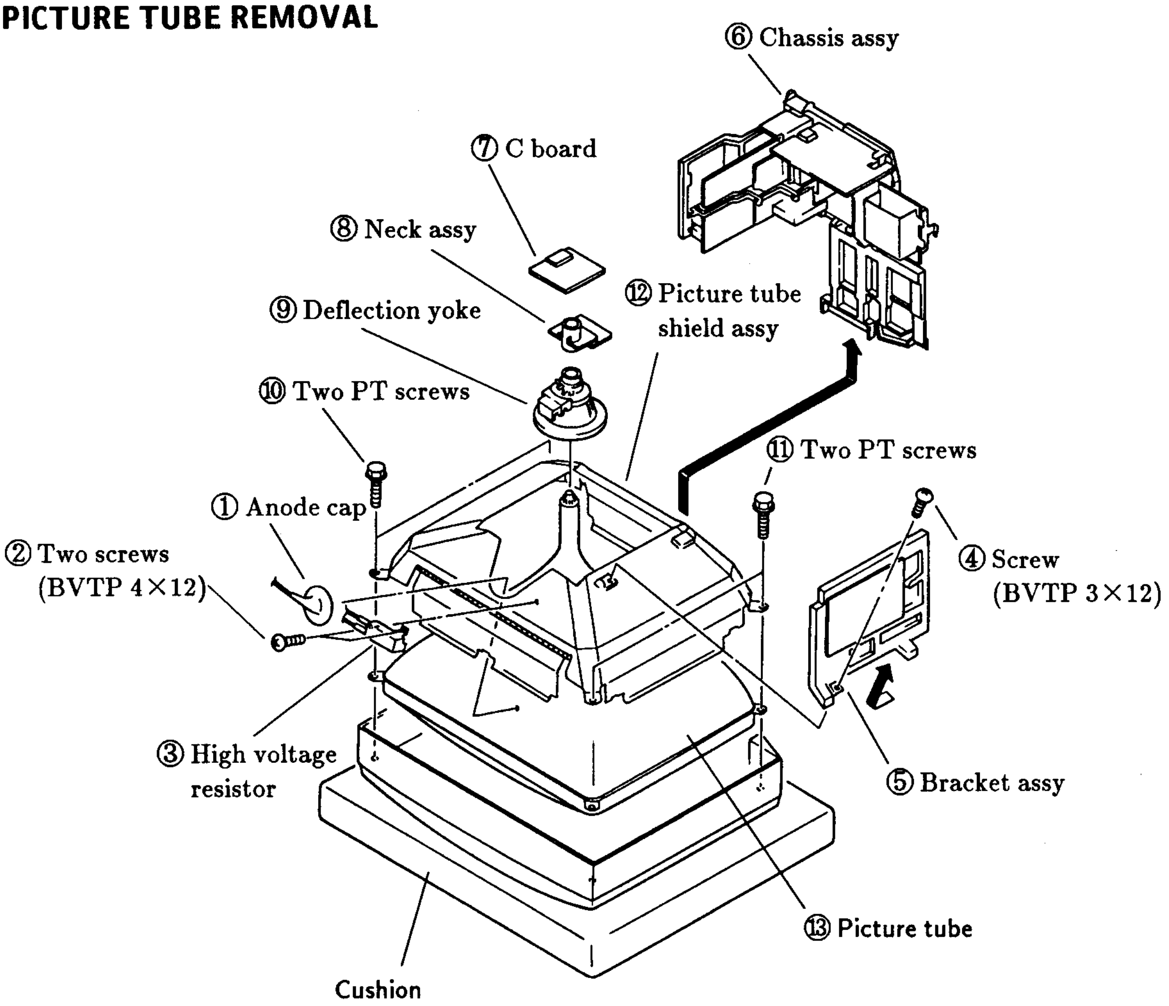

① P board
② B board
③ V board
Connector

2-6. SERVICE POSITION

* Remove the connector bracket and then perform the following servicing.
(refer to 2-2. CHASSIS ASSY REMOVAL)

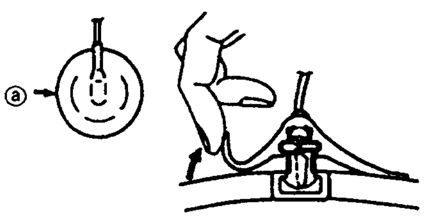

① Remove chassis assy in the arrow direction.

2-7. PICTURE TUBE REMOVAL

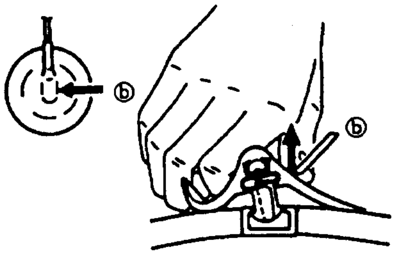

⑥ Chassis assy
⑦ C board
⑧ Neck assy
⑨ Deflection yoke
⑫ Picture tube shield assy
⑩ Two PT screws
⑪ Two PT screws
① Anode cap
② Two screws (BVTP 4×12)
④ Screw (BVTP 3×12)
③ High voltage resistor
⑤ Bracket assy
⑬ Picture tube
Cushion

• REMOVAL OF ANODE-CAP

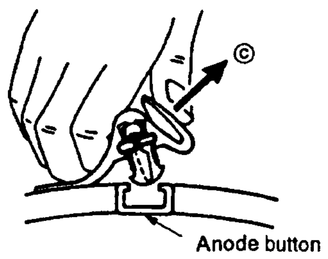
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.


ⓒ
Anode button

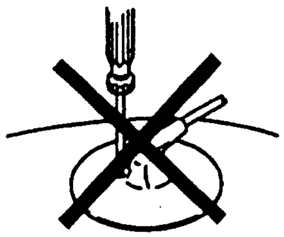
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

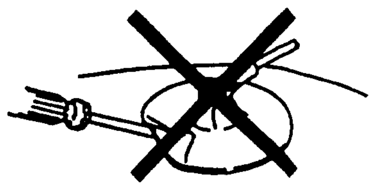
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there is specific instruction to the contrary, carry out these adjustments with the rated power supply.
- Unless there is specific instruction to the contrary, set the controls and switches this way :

  ◑ Contrast ………80%
  (or remote control normal)
  ☼ Brightness ………50%

- Carry out the following adjustments in this order:
  1. Beam landing
  2. Convergence
  3. Focus
  4. White balance

Note : Testing equipment required
1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

Preparations :

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
   Contrast }
   Bightness } normal
2. Position neck ass'y as shown in Fig 3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side.
   (See Figures 3-1 through 3-3.)
5. Move the deflection yoke forward and adjust so that entire screen is red. (See Figure 3-1.)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it.
   (See Figure 3-4.)

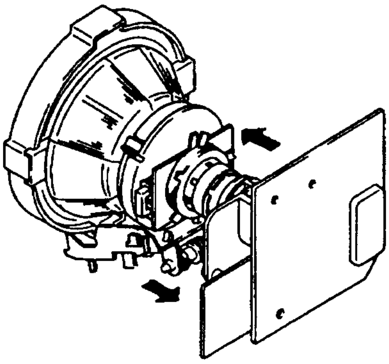
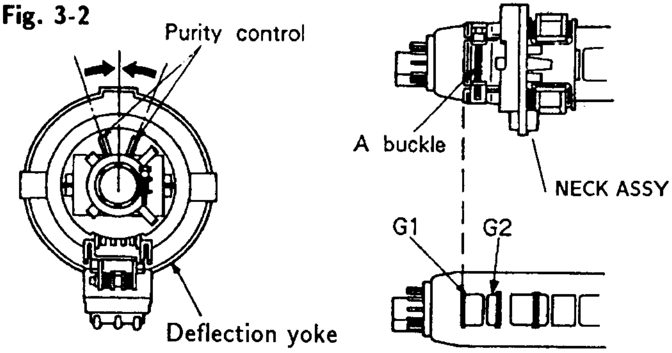


Fig. 3-1

Fig. 3-2


Purity control
A buckle
NECK ASSY
G1
G2
Deflection yoke

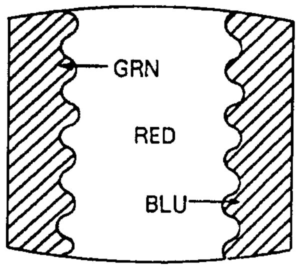


Fig. 3-3

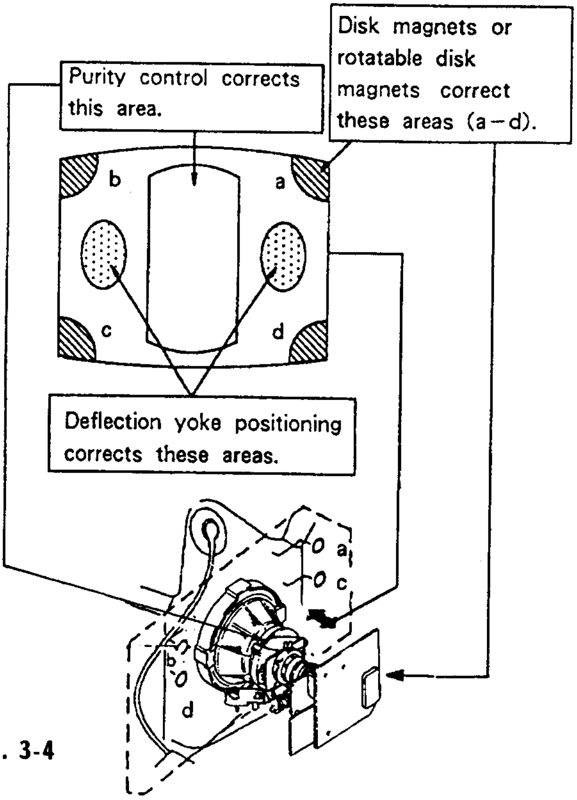

Disk magnets or rotatable disk magnets correct these areas (a–d).
Purity control corrects this area.
b
a
c
d
Deflection yoke positioning corrects these areas.
a
c
b
d

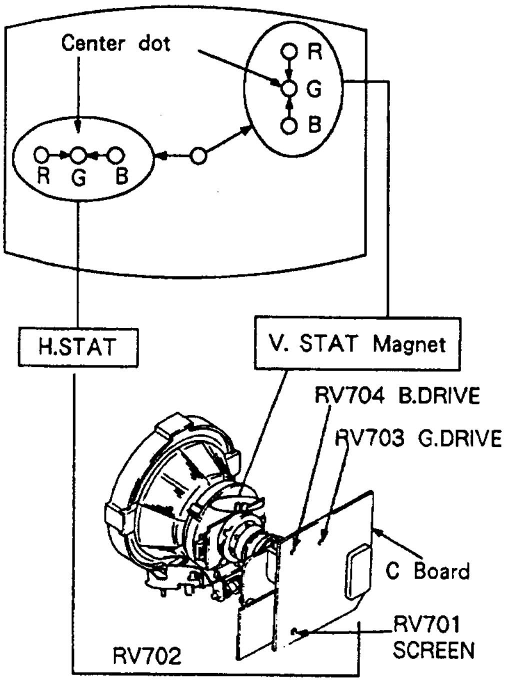
Fig. 3-4

3-2. CONVERGENCE

Preparations :

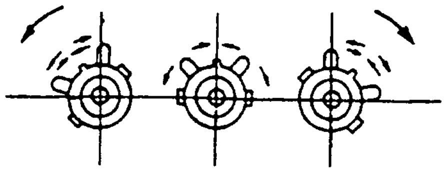
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) Horizontal and vertical static convergence

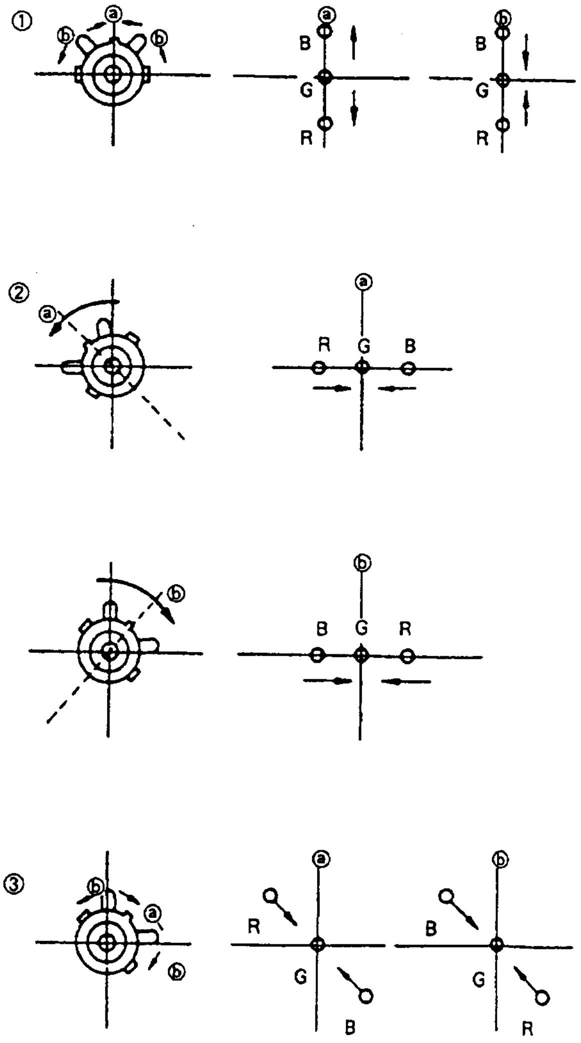

Center dot
R
G
B
R G B
H.STAT
V. STAT Magnet
RV704 B.DRIVE
RV703 G.DRIVE
C Board
RV701
SCREEN
RV702

1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

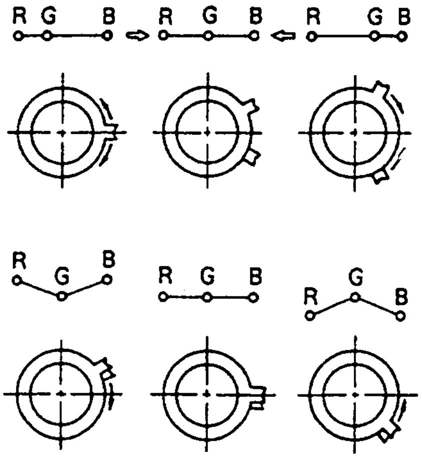
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



4. If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.

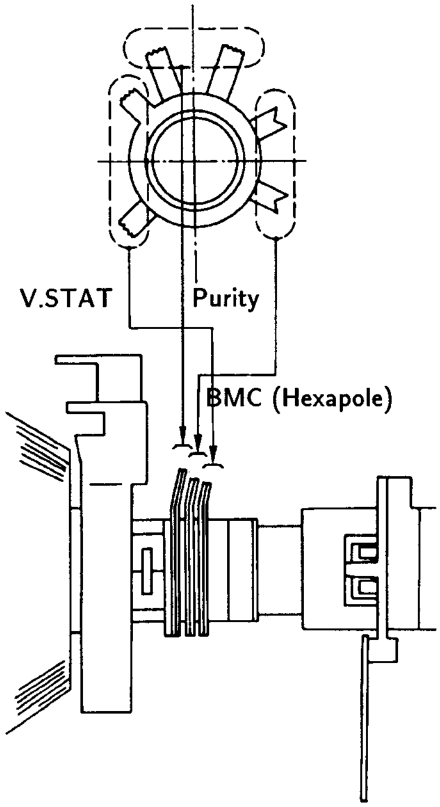

①
ⓐ
ⓑ
ⓑ
ⓐ
B
G
R
ⓑ
B
G
R
②
ⓐ
ⓐ
R G B
ⓑ
ⓑ
B G R
③
ⓑ
ⓐ
ⓑ
ⓐ
R
G
B
ⓑ
B
G
R

- Operation of BMC (Hexapole) Magnet



- The respective dot positions resulting from moving of each magnet interact so be sure to perform adjustment while tracking.

  Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction)



(2) Dynamic Convergence Adjustment

1. Adjust the Y.CROSS (RV1705) and Y.BOW (RV1702), so that RED and BLUE shown in Fig. 3-6 will bccomc a=b=c.

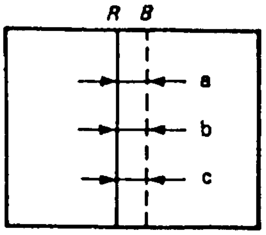


Fig. 3-6

2. Match the horizontal convergence at the center of the screen with H STAT VR.
3. Adjust the CORNER BOW (RV1703), so that RED and BLUE shown in Fig. 3-7 will become a=b=c and d=c=f.

   Note : At this point, if the proper relationship between a=c or d=f is not established, adjust the Y.CROSS (RV1705) again.

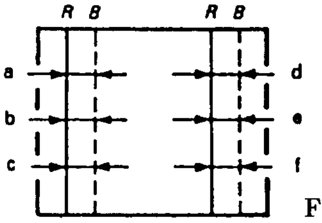


Fig. 3-7

4. Match the horizontal convergence at the center of the screen with the H STAT VR.
5. Adjust the H TILT (RV1701) so that the RED and BLUE shown in Fig. 3-8 will become a=b..

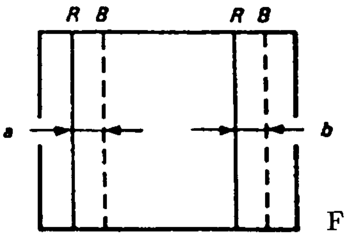


Fig. 3-8

6. Adjust the H AMP (RV1704) so that the RED and BLUE shown in Fig. 3-9 will become b=c

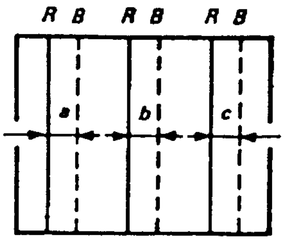
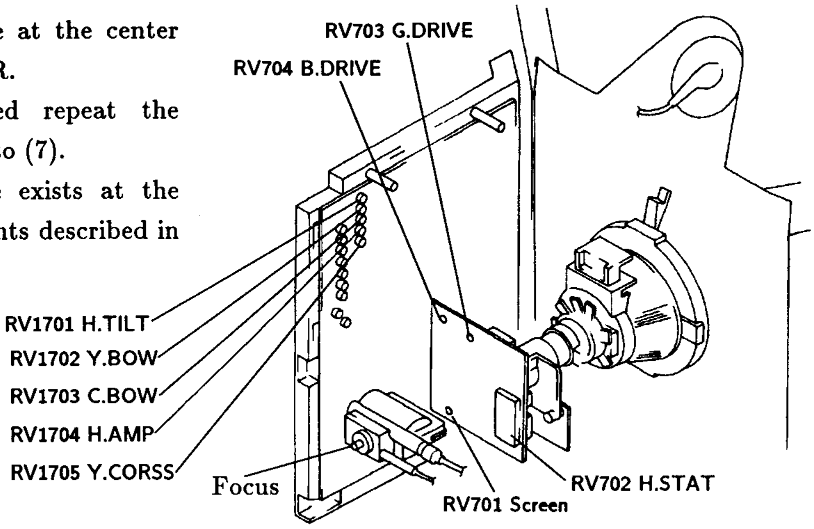
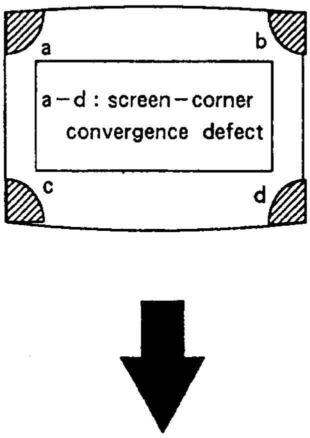


Fig. 3-9

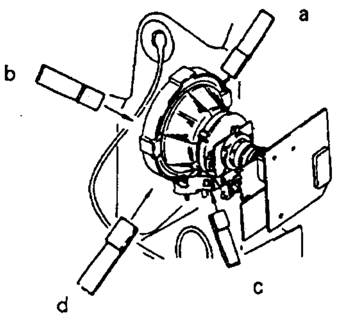
7. Match the horizontal convergence at the center of the screen with the H STAT VR.
8. When the H AMP is adjusted repeat the procedures described in Steps (5) to (7).
9. If divergence of the convergence exists at the corner of the screen, the adjustments described in Steps after (3) should be repeated.


RV703 G.DRIVE
RV704 B.DRIVE
RV1701 H.TILT
RV1702 Y.BOW
RV1703 C.BOW
RV1704 H.AMP
RV1705 Y.CORSS
Focus
RV701 Screen
RV702 H.STAT

(3) Screen corner convergence


a
b
a－d : screen－corner convergence defect
c
d

Install the permalloy assembly for the section with faulty.



Permalloy

3-3. FOCUS

Adjust the focus to optimize the screen.

3-4. WHITE BALANCE

Screen G2 setting

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its minimum level.
3. Apply 180VDC to the R, G, and B cathodes with an external power supply.
4. While watching the picture, adjust G2 control RV701 (Screen) to the point just before the return lines disappear.

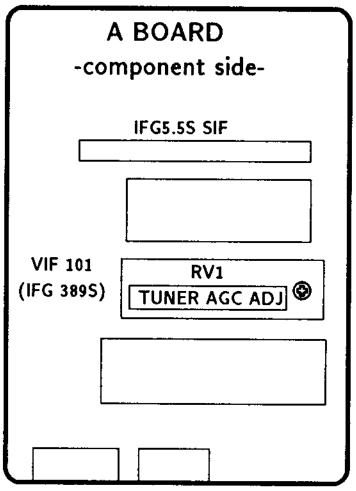
White balance adjustment

1. Input an all-white signal from the pattern generator.
2. Set the picture brightness and color controls to their normal levels.
3. Use the RV704 (B Drive) and RV703 (G Drive) to adjust white balance.

In the adjustments below, have the picture color and brightness settings at their normal levels unless there is a specific instruction to the contrary.

SECTION 4
CIRCUIT ADJUSTMENTS

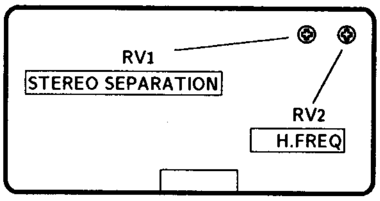
4-1. A BOARD ADJUSTMENT


A BOARD
-component side-
IFG5.5S SIF
VIF 101
(IFG 389S)
RV1
TUNER AGC ADJ

TUNER AGC ADJUSTMENT (IFG 389S)

1. Tune in an off-air signal.
2. Adjust AGC VR (IFG389S) so that snow noise and cross modulation just disappear from the picture.

IFG5.5S SIF


RV1
STEREO SEPARATION
RV2
H.FREQ

IFG5.5S SIF -component side-

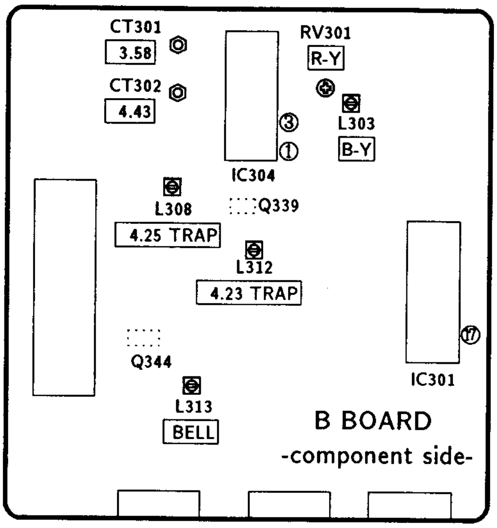
STEREO SEPALATION ADJUSTMENT (RV1)

1. Input stereo signals. (L-CH 400Hz, R-CH 1KHz)
2. Check the stereo indicator.
3. Connect on oscilloscope to pin⑧ (CH1) of CN1 through band pass filter of 1KHz
4. Adjust RV1 so that 1KHz voltage goes down to the minmum.

H FREQ (RV2)

1. Input a PAL COLOR BAR signal, then connect a jumper between pin⑫ IC4 and GND.
2. Connect a frequency counter to pin④ IFG5.5S (HP) of CN1 through a probe of 10 : 1.
3. Adjust RV2 (H.FREQ) 15.625±50Hz.
4. After adjustment, remove the jamper.

4-2. B BOARD ADJUSTMENTS


CT301
3.58
CT302
4.43
RV301
R-Y
L303
B-Y
③
①
IC304
L308
Q339
4.25 TRAP
L312
4.23 TRAP
Q344
⑰
IC301
L313
BELL
B BOARD
-component side-

REF OSC NTSC 3.58 MHz Adjustment (CT301)

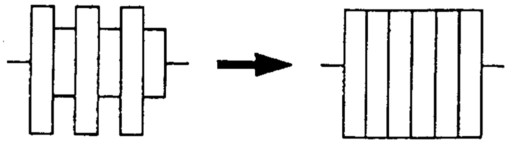
1. Input an NTSC 3.58 MHz COLOR BAR pattern.
2. Short circuit between pin ⑰ of IC301 and ground.
3. Adjust CT301 to get the slowest picture movement.
4. Remove the jumper wire from IC301.

REF OSC Adjustment NTSC 4.43 MHz Adjustment (CT302)

1. Input an NTSC 4.43 MHz COLOR BAR pattern.
2. Short circuit between pin ⑰ of IC301 and ground.
3. Adjust CT302 to get the slowest picture movement.
4. Remove the jumper wire from IC301.

BELL FILTER ADJUSTMENT (L313)

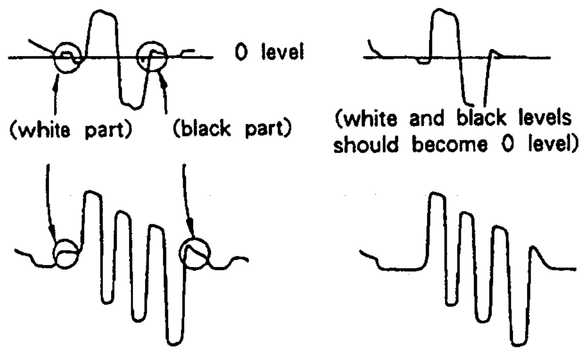
1. Input a SECAM color bar signal.
2. Connect the oscilloscope to the emitter of Q344.
3. Adjust L313 so that the waveform is flat.



<Before Adjustment> <After Adjustment>

DISCRIMINATION ADJUSTMENT (RV301 and L303)

1. Input a SECAM color bar signal.
2. Connect the oscilloscope to pin ① of IC304.
3. Adjust RV301 until the white and black sections of the waveform at pin ① are at the 0 level.
Connect the oscilloscope to pin ③ of IC304.
4. Adjust L303 until the white and black sections of
5. the waveform at pin ③ are at the 0 level.


0 level
(white part)
(black part)
(white and black levels should become 0 level)

(Before Adjustment) (After adjustment)

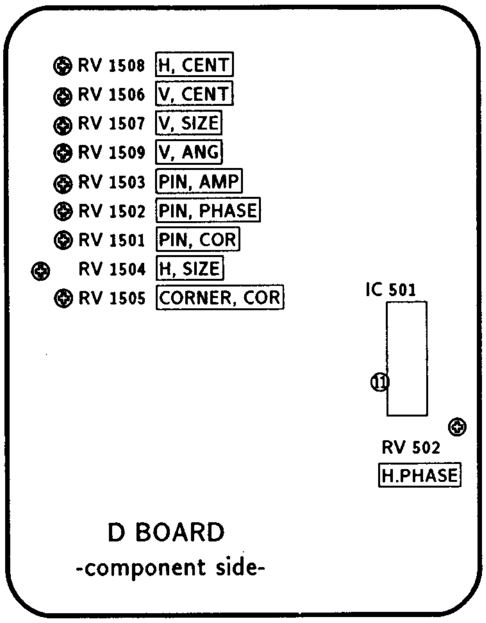
4.25 TRAP Adjustment (L308)

1. Input SECAM COLOR BAR pattern.
2. Connect an oscilloscope to the Q339 emitter.
3. Adjust L308 so that the 4.25 MHz waveform is minimum.

4.23 TRAP ADJUSTMENT(L312)

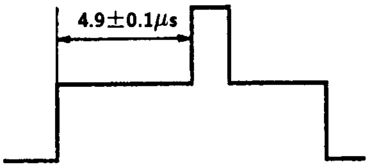
1. Input SECAM COLOR BAR pattern.
2. Connect an oscilloscope to the Q339 emitter.
3. Adjust L312 so that the 4.43 MHz waveform is minimum.

4-3. D BOARD ADJUSTMENTS

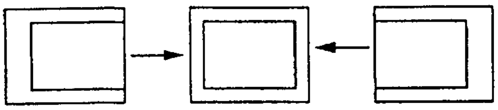

RV 1508 H, CENT
RV 1506 V, CENT
RV 1507 V, SIZE
RV 1509 V, ANG
RV 1503 PIN, AMP
RV 1502 PIN, PHASE
RV 1501 PIN, COR
RV 1504 H, SIZE
RV 1505 CORNER, COR
IC 501
⑪
RV 502
H.PHASE
D BOARD
-component side-

H.PHASE ADJUSTMENT (RV502)

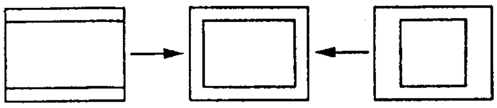
1. Input a PAL color bar signal.
2. Set the picture and brightness controls to their normal levels.
3. Set RV1508 (H.CENT) to its mechanical center.
4. Connect the oscilloscope to pin ⑪ (SCP) of IC 501.
5. Rotate RV502 to adjust to 4.9±0.1μs.



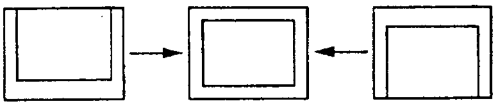
RV1508
H. CENT (HORIZONTAL CENTER)



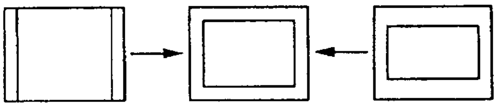
RV1504
H. SIZE (HORIZONTAL SIZE)



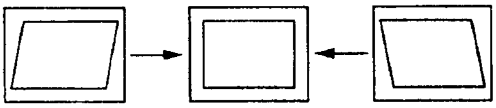
RV1506
V. CENT (VERTICAL CENTER)



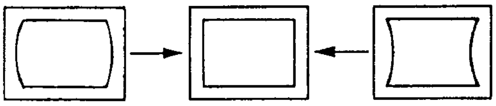
RV1507
V. SIZE (VERTICAL SIZE)



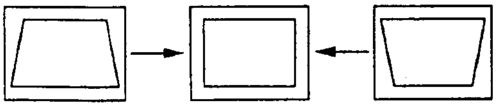
RV1509
V. ANGLE (VERTICAL ANGLE)



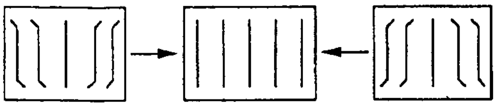
RV1503
PIN AMP (PINCUSHION AMPLIFIER)



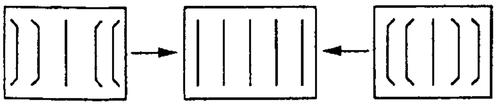
RV1502
PIN PHASE (PINCUSHION PHASE)



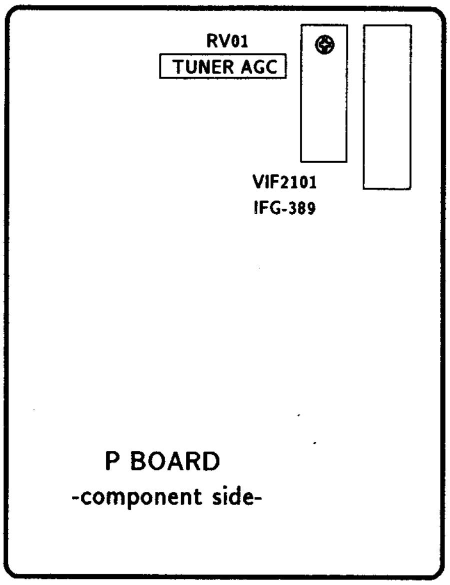
RV1501
PIN. COR (PINCUSHION CORRECT)



RV1505
CORNER. COR (CORNER CORRECT)



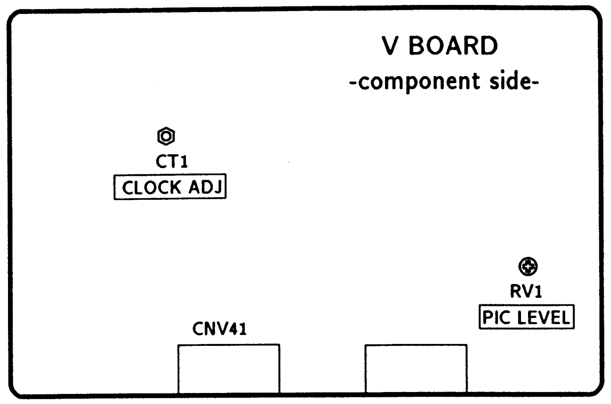
4-4. P BOARD ADJUSTMENTS


RV01
TUNER AGC
VIF2101
IFG-389
P BOARD
-component side-

TUNER AGC ADJUSTMENT (RV01)

1. Tune in an off-arr signal.
2. Adjust AGC RV01 so that snow noise and cross-modulation just disappear from the picture.

4-5. V BOARD ADJUSTMENTS


V BOARD
-component side-
CT1
CLOCK ADJ
RV1
PIC LEVEL
CNV41

CLOCK ADJUSTMENT (CT1)

1. Remove the CNV41 connector pin ③ .
2. Put the system into text mode.
3. Adjust CT1 so that the picture does not move.

PIC LEVEL ADJUSTMENT (RV1)

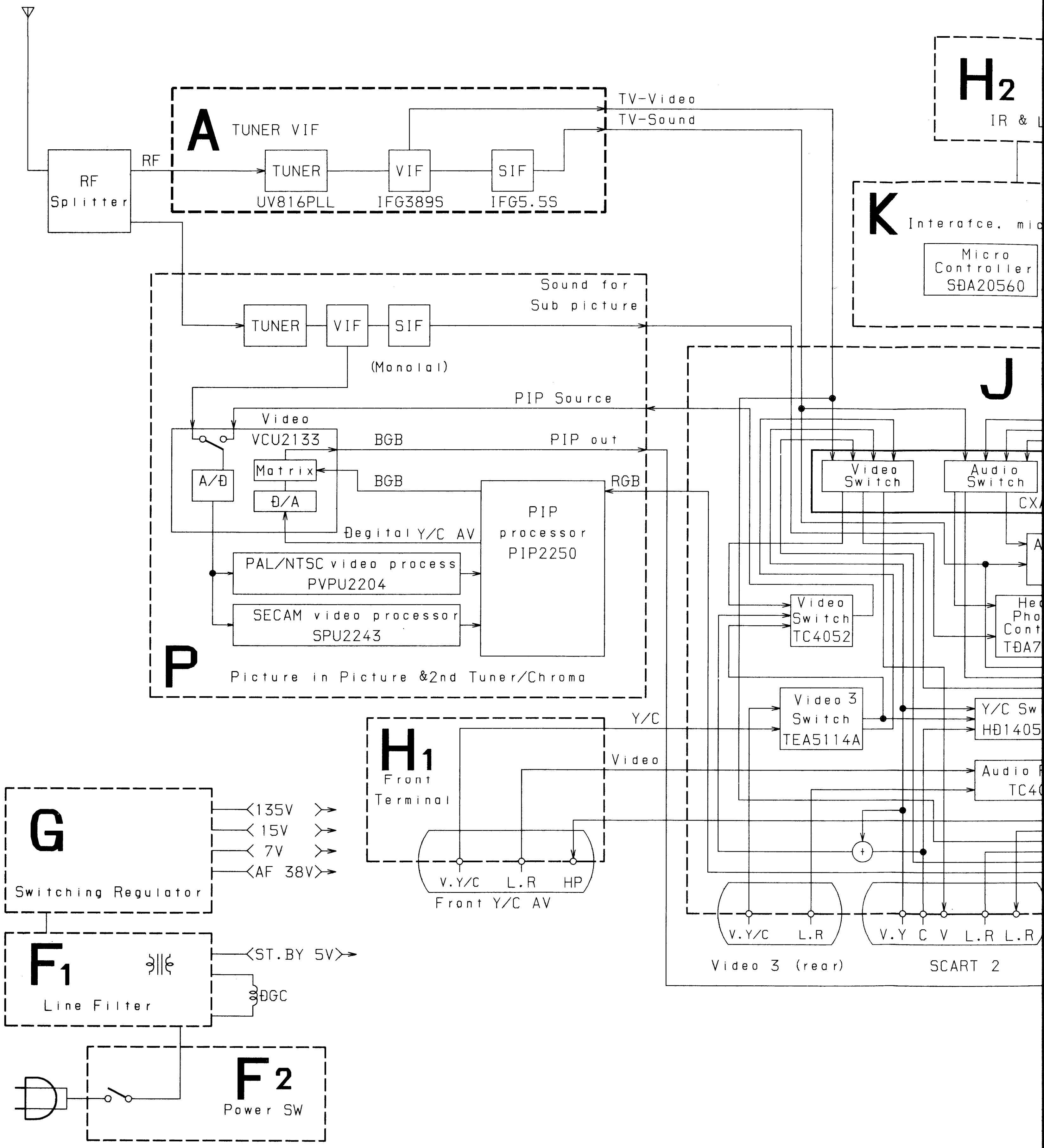
1. Maximize the picture setting.
2. Adjust RV1 so that the RGB output is 0.75V.

MEMO

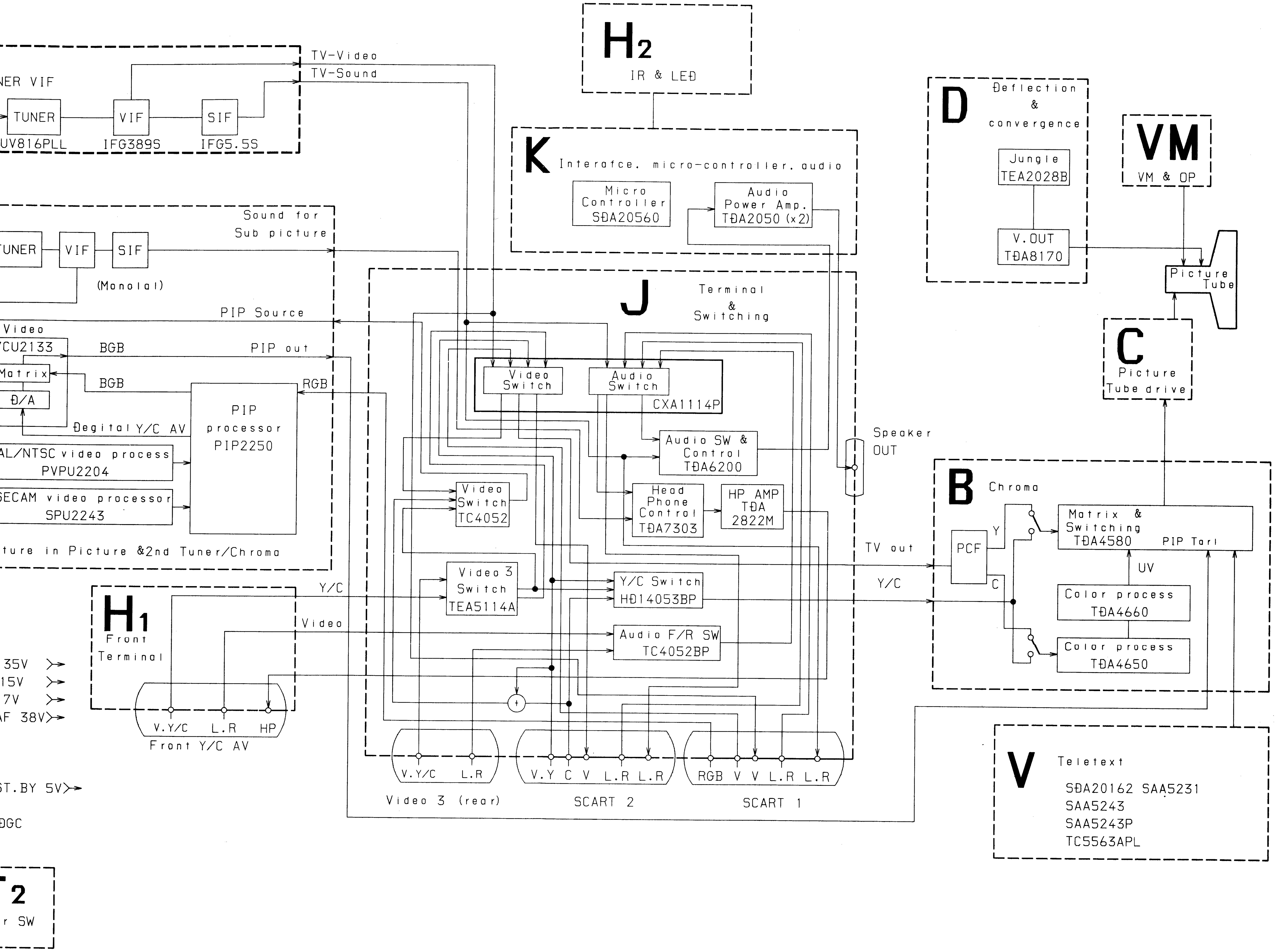
MEMO

SECTION 5
DIAGRAMS

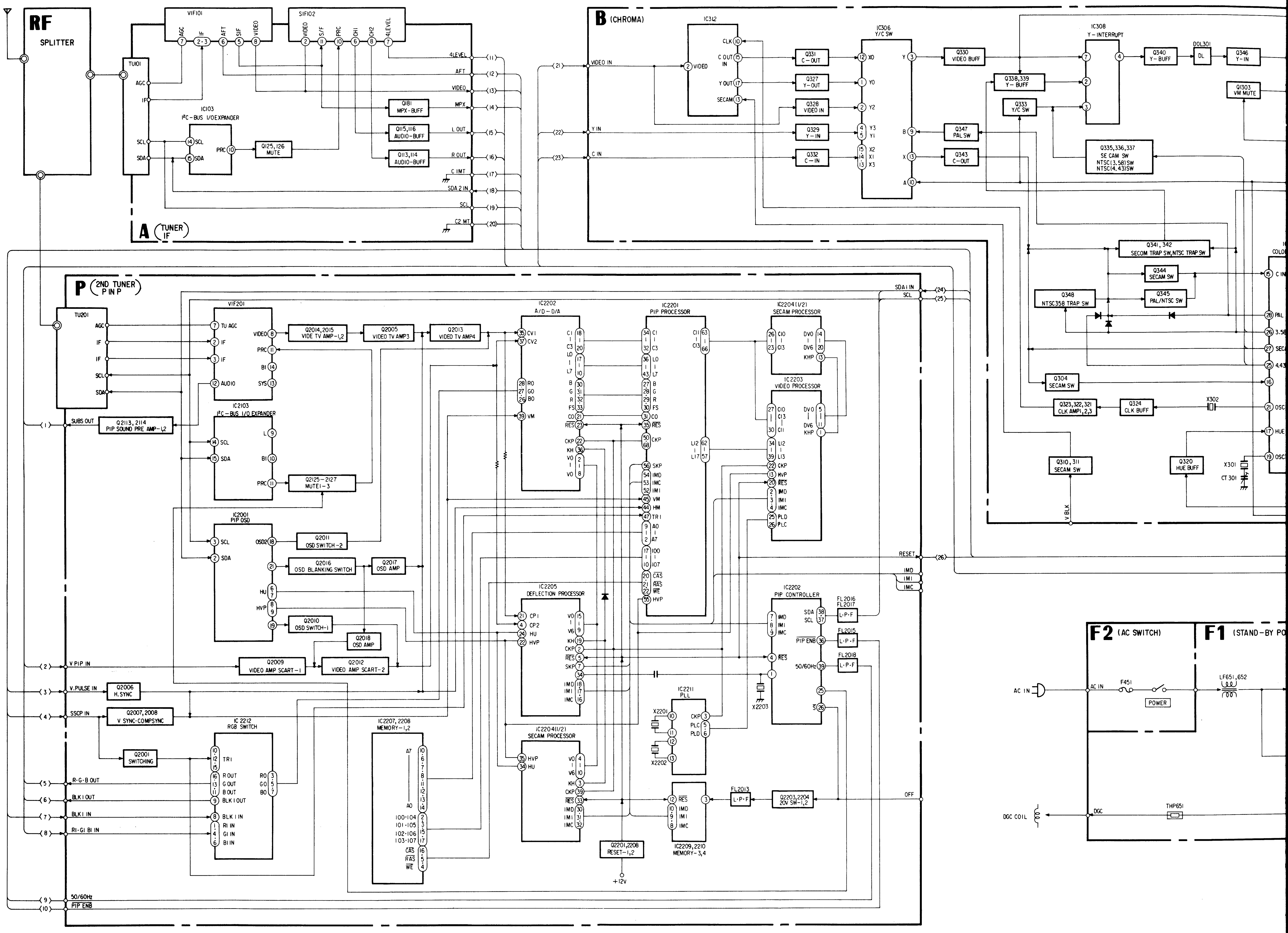
5-1. BLOCK DIAGRAM (1)

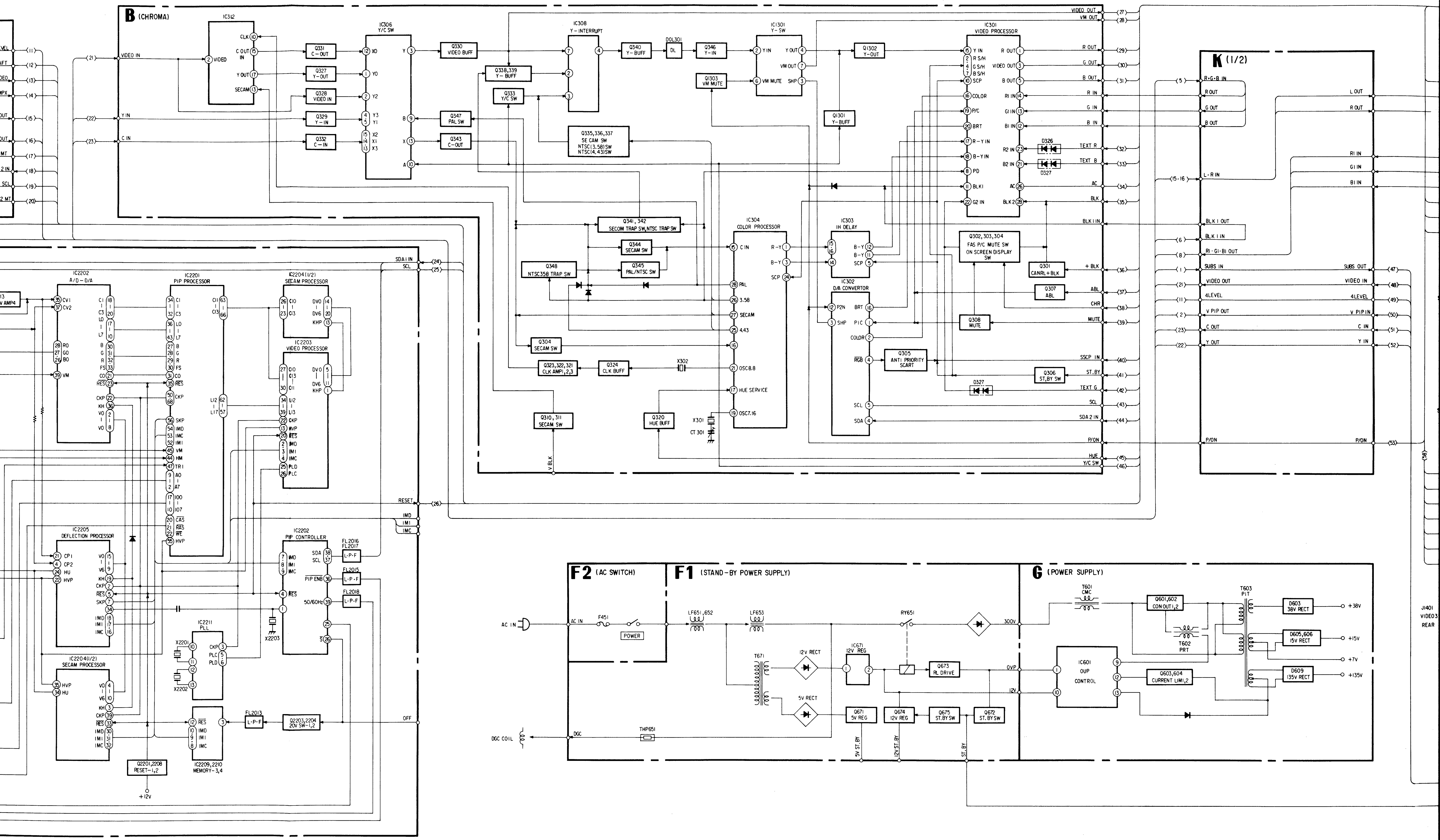

RF
Splitter
RF
A
TUNER VIF
TUNER
UV816PLL
VIF
IFG389S
SIF
IFG5.5S
TV-Video
TV-Sound
H2
IR &
K
Interafce.
Micro
Controller
SDA20560
Sound for
Sub picture
TUNER
VIF
SIF
(Monolal)
PIP Source
Video
VCU2133
BGB
PIP out
A/D
Matrix
D/A
BGB
RGB
PIP
processor
PIP2250
Degital Y/C AV
PAL/NTSC video process
PVPU2204
SECAM video processor
SPU2243
P
Picture in Picture &2nd Tuner/Chroma
J
Video
Switch
Audio
Switch
Video
Switch
TC4052
Video 3
Switch
TEA5114A
Y/C Sw
HD1405
Audio
Y/C
Video
H1
Front
Terminal
V.Y/C
L.R
HP
Front Y/C AV
V.Y/C
L.R
Video 3 (rear)
V.Y C V L.R L.R
SCART 2
G
Switching Regulator
135V
15V
7V
AF 38V
F1
Line Filter
ST.BY 5V
DGC
F2
Power SW

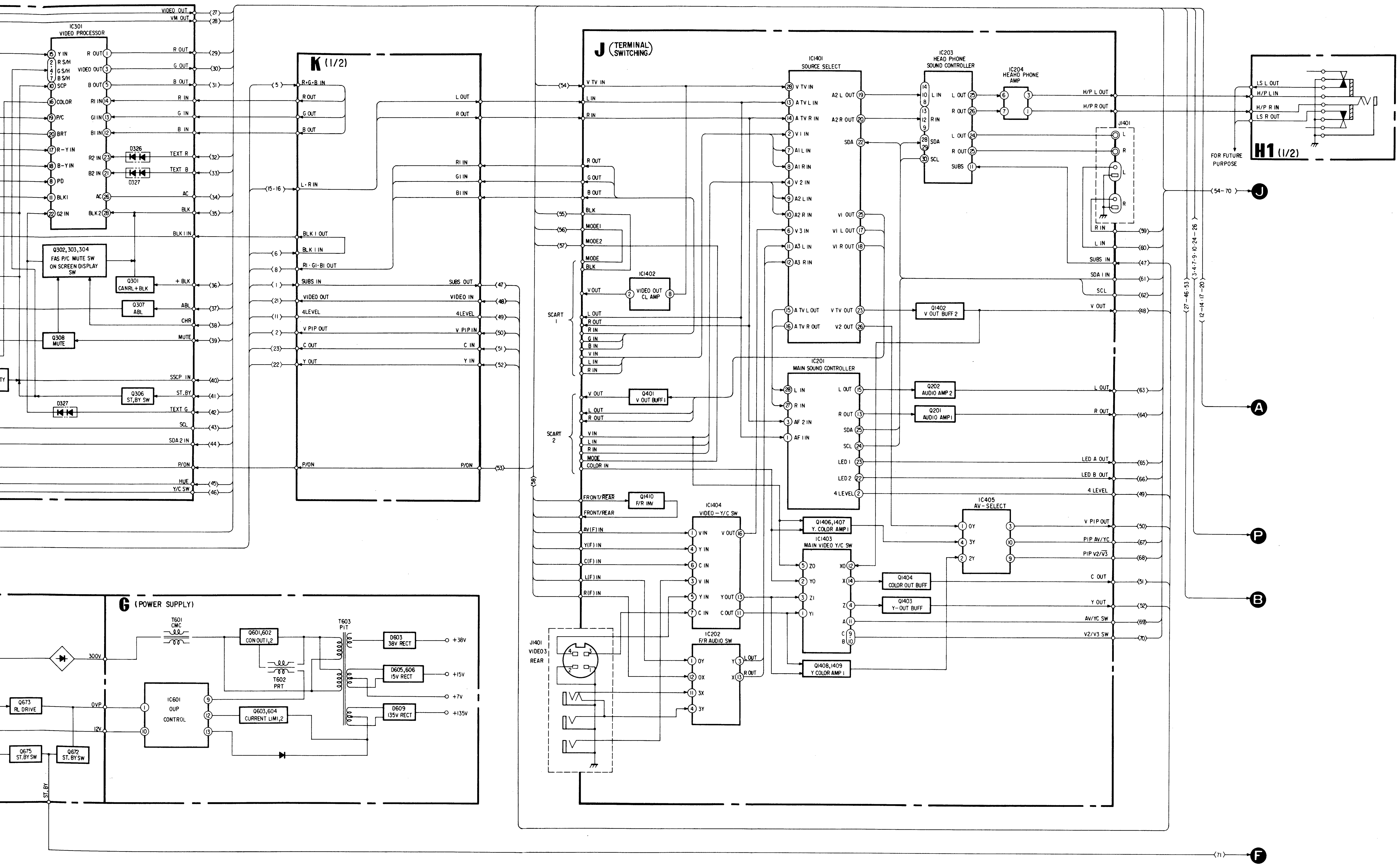
SECTION 5
DIAGRAMS


TV-Video
TV-Sound
NER VIF
TUNER
UV816PLL
VIF
IFG389S
SIF
IFG5.5S
H2
IR & LED
K
Interafce, micro-controller, audio
Micro Controller
SDA20560
Audio Power Amp.
TDA2050 (x2)
D
Deflection & convergence
Jungle
TEA2028B
V.OUT
TDA8170
VM
VM & OP
Picture Tube
C
Picture Tube drive
Sound for Sub picture
TUNER
VIF
SIF
(Monolal)
PIP Source
Video
VCU2133
BGB
PIP out
Matrix
BGB
RGB
D/A
PIP processor
PIP2250
Degital Y/C AV
AL/NTSC video process
PVPU2204
SECAM video processor
SPU2243
ture in Picture &2nd Tuner/Chroma
J
Terminal & Switching
Video Switch
Audio Switch
CXA1114P
Audio SW & Control
TDA6200
Video Switch
TC4052
Head Phone Control
TDA7303
HP AMP
TDA
2822M
Speaker OUT
Video 3 Switch
TEA5114A
Y/C Switch
HD14053BP
Audio F/R SW
TC4052BP
Y/C
Video
H1
Front Terminal
35V
15V
7V
AF 38V
ST.BY 5V
DGC
V.Y/C
L.R
HP
Front Y/C AV
V.Y/C
L.R
Video 3 (rear)
V.Y C V L.R L.R
SCART 2
RGB V V L.R L.R
SCART 1
TV out
Y/C
B
Chroma
PCF
Y
C
Matrix & Switching
TDA4580
PIP Tari
UV
Color process
TDA4660
Color process
TDA4650
V
Teletext
SDA20162 SAA5231
SAA5243
SAA5243P
TC5563APL
T2
r SW

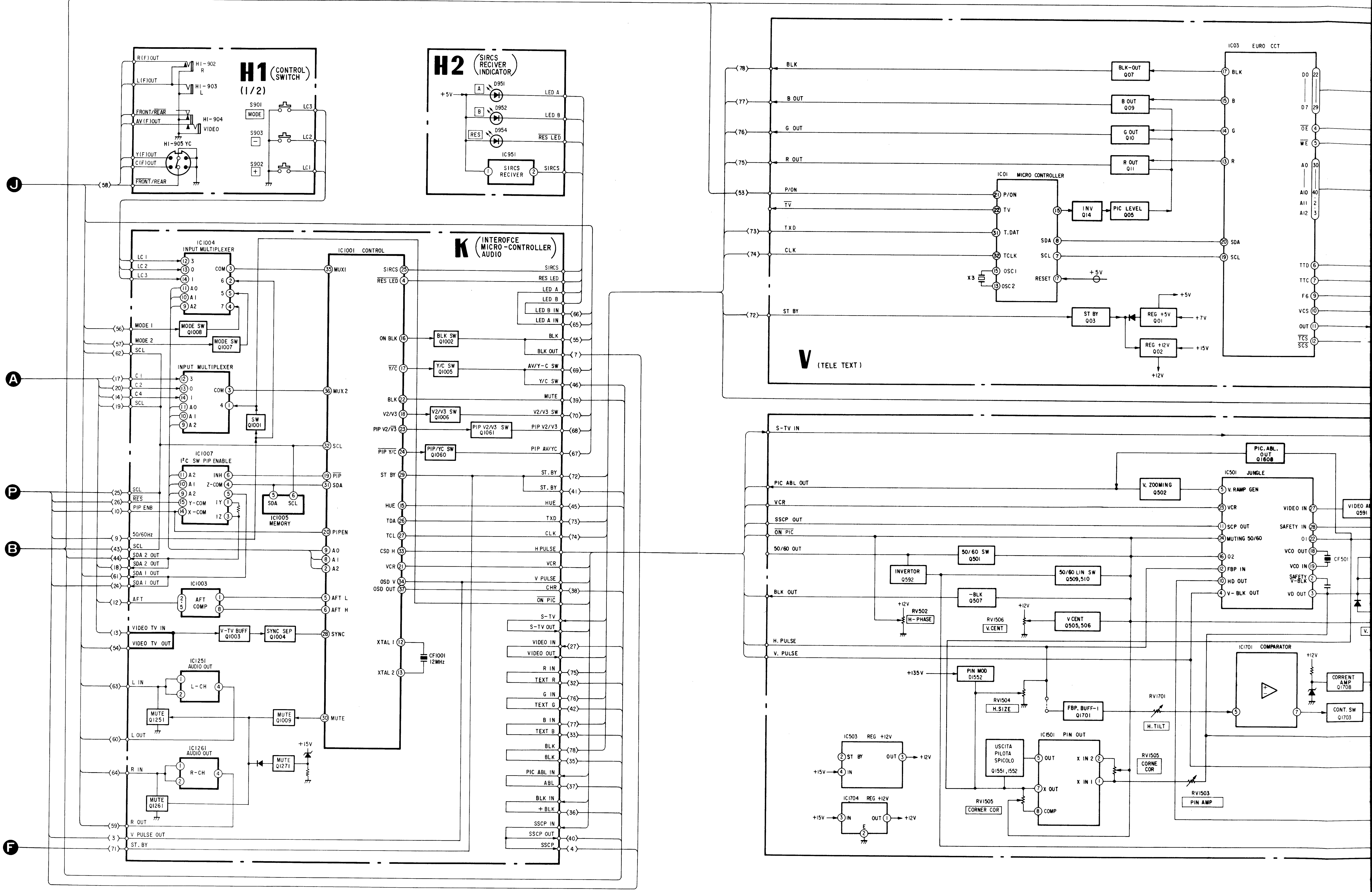
BLOCK DIAGRAM (2)

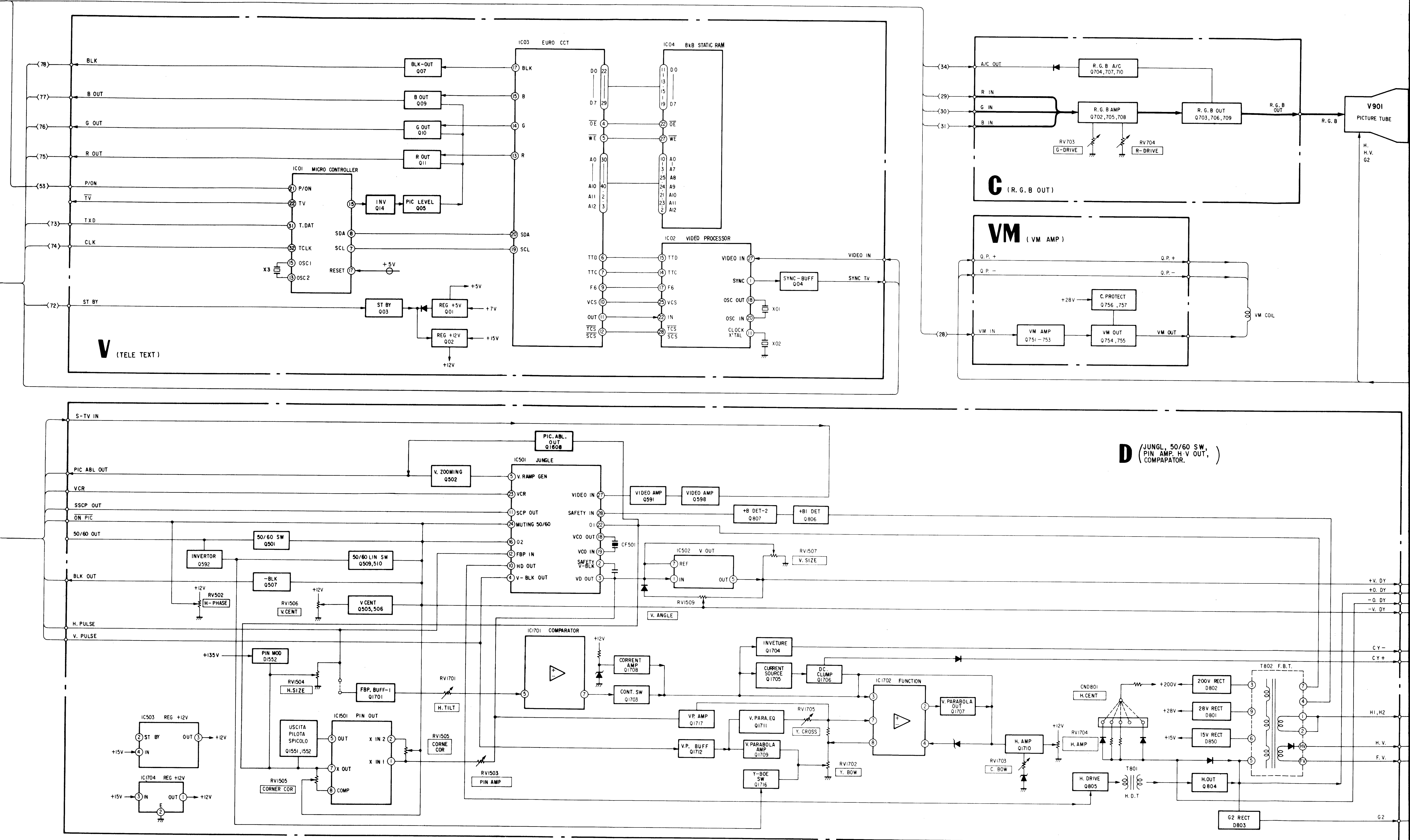

RF
SPLITTER
TU101
AGC
IF
SCL
SDA
VIF101
SIF102
IC103
I²C-BUS I/O EXPANDER
Q125,126
MUTE
Q181
MPX-BUFF
Q115,116
AUDIO-BUFF
Q113,114
AUDIO-BUFF
4LEVEL
AFT
VIDEO
MPX
L OUT
R OUT
C IMT
SDA 2 IN
SCL
C2 MT
A (TUNER IF)
B (CHROMA)
IC312
VIDEO IN
Y IN
C IN
CLK
C OUT IN
Y OUT
SECAM
Q331
C-OUT
Q327
Y-OUT
Q328
VIDEO IN
Q329
Y-IN
Q332
C-IN
IC306
Y/C SW
Q330
VIDEO BUFF
Q347
PAL SW
Q343
C-OUT
Q338,339
Y-BUFF
Q333
Y/C SW
IC308
Y-INTERRUPT
Q340
Y-BUFF
DDL301
DL
Q346
Y-IN
Q1303
VM MUTE
Q335,336,337
SECAM SW
NTSC(3.58)SW
NTSC(4.43)SW
Q341,342
SECOM TRAP SW,NTSC TRAP SW
Q344
SECAM SW
Q345
PAL/NTSC SW
Q348
NTSC358 TRAP SW
Q304
SECAM SW
Q323,322,321
CLK AMP1,2,3
Q324
CLK BUFF
X302
Q310,311
SECAM SW
Q320
HUE BUFF
X301
CT301
V BLK
COLOR
C IN
PAL
3.58
SECAM
4.43
OSC
HUE
P (2ND TUNER PINP)
TU201
AGC
IF
IF
SCL
SDA
SUBS OUT
Q2113,2114
PIP SOUND PRE AMP-1,2
VIF201
TU AGC
VIDEO
PRC
IF
BI
SYS
AUDIO
Q2014,2015
VIDE TV AMP-1,2
Q2005
VIDEO TV AMP3
Q2013
VIDEO TV AMP4
IC2103
I²C-BUS I/O EXPANDER
Q2125-2127
MUTE1-3
IC2001
PIP OSD
Q2011
OSD SWITCH-2
Q2016
OSD BLANKING SWITCH
Q2017
OSD AMP
Q2010
OSD SWITCH-1
Q2018
OSD AMP
Q2009
VIDEO AMP SCART-1
Q2012
VIDEO AMP SCART-2
V PIP IN
V.PULSE IN
Q2006
H.SYNC
SSCP IN
Q2007,2008
V SYNC-COMPSYNC
Q2001
SWITCHING
IC2212
RGB SWITCH
R-G-B OUT
BLK1 OUT
BLK1 IN
R1-G1 B1 IN
IC2207,2208
MEMORY-1,2
IC2202
A/D-D/A
IC2201
PIP PROCESSOR
IC2204(1/2)
SECAM PROCESSOR
IC2203
VIDEO PROCESSOR
IC2205
DEFLECTION PROCESSOR
IC2204(1/2)
SECAM PROCESSOR
IC2211
PLL
X2201
X2202
IC2209,2210
MEMORY-3,4
Q2201,2208
RESET-1,2
+12V
IC2202
PIP CONTROLLER
X2203
FL2016
FL2017
L-P-F
FL2015
FL2018
FL2013
Q2203,2204
20V SW-1,2
SDA1 IN
SCL
RESET
IMD
IM1
IMC
OFF
50/60Hz
PIP ENB
F2 (AC SWITCH)
AC IN
F451
POWER
DGC COIL
DGC
THP651
F1 (STAND-BY PO
LF651,652

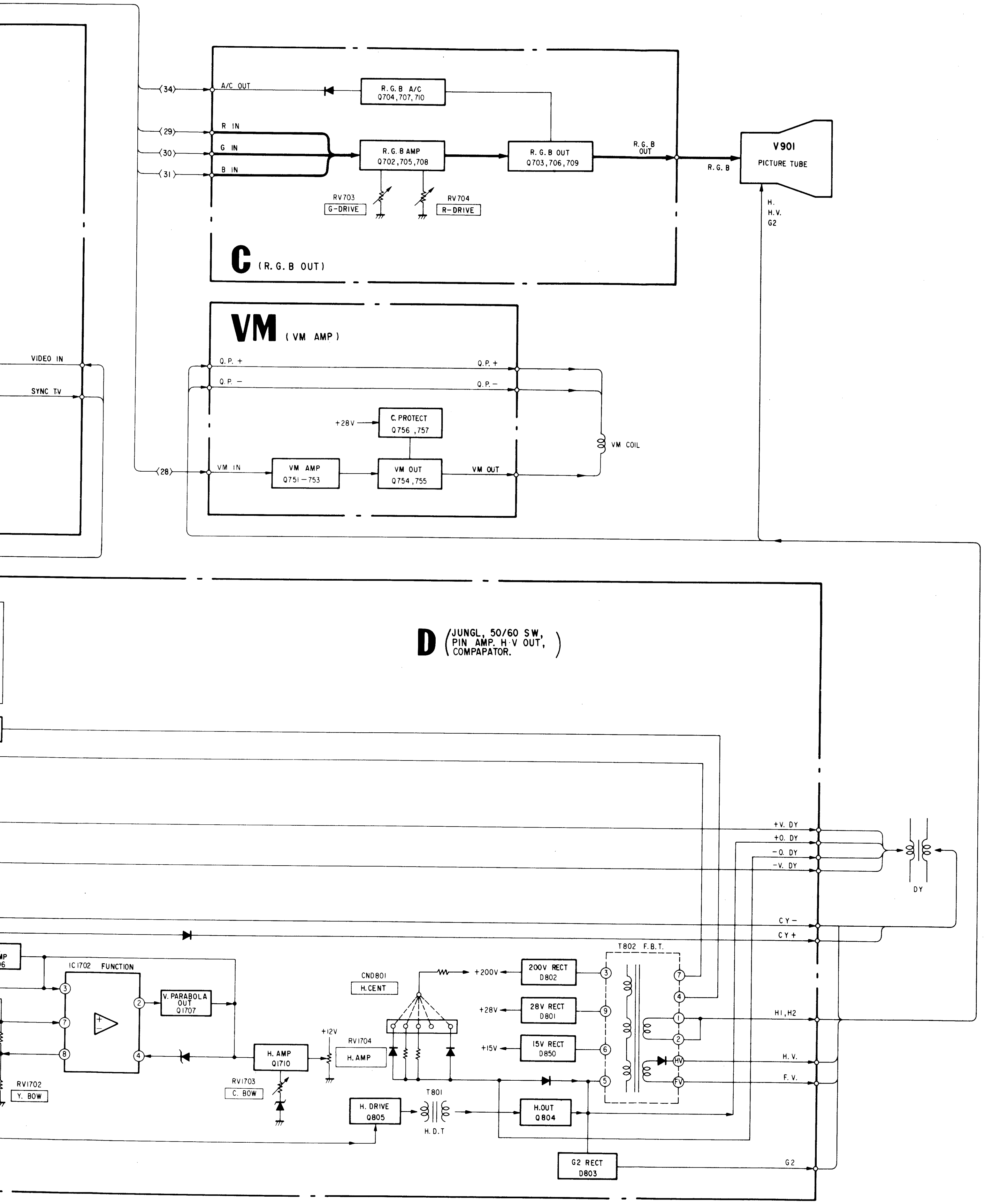

B (CHROMA)
IC312
VIDEO IN
Y IN
C IN
CLK
C OUT IN
Y OUT
SECAM
Q331 C-OUT
Q327 Y-OUT
Q328 VIDEO IN
Q329 Y-IN
Q332 C-IN
IC306 Y/C SW
Q330 VIDEO BUFF
Q347 PAL SW
Q343 C-OUT
Q338,339 Y-BUFF
Q333 Y/C SW
IC308 Y-INTERRUPT
Q340 Y-BUFF
DL301 DL
Q346 Y-IN
Q1303 VM MUTE
Q335,336,337 SECAM SW NTSC(3.58)SW NTSC(4.43)SW
IC1301 Y-SW
Q1302 Y-OUT
Q1301 Y-BUFF
IC301 VIDEO PROCESSOR
D326
D327
VIDEO OUT
VM OUT
R OUT
G OUT
B OUT
R IN
G IN
B IN
TEXT R
TEXT B
AC
BLK
BLK I IN
Q341,342 SECOM TRAP SW,NTSC TRAP SW
Q344 SECAM SW
Q345 PAL/NTSC SW
Q348 NTSC358 TRAP SW
Q304 SECAM SW
Q323,322,321 CLK AMP1,2,3
Q324 CLK BUFF
X302
Q310,311 SECAM SW
Q320 HUE BUFF
X301
CT301
V BLK
IC304 COLOR PROCESSOR
IC303 1H DELAY
IC302 D/A CONVERTOR
Q302,303,304 FAS P/C MUTE SW ON SCREEN DISPLAY SW
Q301 CANRL+BLK
Q307 ABL
Q308 MUTE
Q305 ANTI PRIORITY SCART
Q306 ST,BY SW
+BLK
ABL
CHR
MUTE
SSCP IN
ST.BY
TEXT G
SCL
SDA 2 IN
P/ON
HUE
Y/C SW
K (1/2)
R·G·B IN
L OUT
R OUT
L·R IN
RI IN
GI IN
BI IN
BLK I OUT
BLK I IN
RI·GI·BI OUT
SUBS IN
SUBS OUT
VIDEO OUT
VIDEO IN
4LEVEL
V PIP OUT
V PIP IN
C OUT
C IN
Y OUT
Y IN
J1401 VIDEO3 REAR
IC2202 A/D-D/A
IC2201 PIP PROCESSOR
IC2204(1/2) SECAM PROCESSOR
IC2203 VIDEO PROCESSOR
SDA1 IN
SCL
RESET
IMD
IM1
IMC
OFF
IC2205 DEFLECTION PROCESSOR
IC2204(1/2) SECAM PROCESSOR
IC2202 PIP CONTROLLER
FL2016 FL2017
FL2015
FL2018
L·P·F
PIP ENB
50/60Hz
X2203
IC2211 PLL
X2201
X2202
FL2013
Q2203,2204 20V SW-1,2
IC2209,2210 MEMORY-3,4
Q2201,2208 RESET-1,2
+12V
F2 (AC SWITCH)
AC IN
F451
POWER
DGC COIL
DGC
THP651
F1 (STAND-BY POWER SUPPLY)
LF651,652
LF653
T671
12V RECT
5V RECT
IC671 12V REG
RY651
Q673 RL DRIVE
Q671 5V REG
Q674 12V REG
Q675 ST.BY SW
Q672 ST.BY SW
5V ST.BY
12V ST.BY
ST.BY
300V
OVP
12V
G (POWER SUPPLY)
T601 CMC
Q601,602 CONOUT1,2
T602 PRT
IC601 OVP CONTROL
Q603,604 CURRENT LIMI1,2
T603 PIT
D603 38V RECT
Q605,606 15V RECT
D609 135V RECT
+38V
+15V
+7V
+135V


IC301 VIDEO PROCESSOR
Y IN
R S/H
G S/H
B S/H
SCP
COLOR
P/C
BRT
R-Y IN
B-Y IN
PD
BLKI
G2 IN
R OUT
VIDEO OUT
B OUT
RI IN
GI IN
BI IN
R2 IN
B2 IN
AC
BLK2
VIDEO OUT
VM OUT
G OUT
R IN
G IN
B IN
D326
D327
TEXT R
TEXT B
BLK
BLK I IN
Q302,303,304 FAS P/C MUTE SW ON SCREEN DISPLAY SW
Q301 CANRL+BLK
+ BLK
Q307 ABL
ABL
CHR
Q308 MUTE
MUTE
SSCP IN
Q306 ST,BY SW
ST.BY
TEXT G
SCL
SDA 2 IN
P/ON
HUE
Y/C SW
K (1/2)
R·G·B IN
R OUT
G OUT
B OUT
L·R IN
BLK I OUT
BLK I IN
RI·GI·BI OUT
SUBS IN
VIDEO OUT
4LEVEL
V PIP OUT
C OUT
Y OUT
P/ON
L OUT
R OUT
RI IN
GI IN
BI IN
SUBS OUT
VIDEO IN
4LEVEL
V PIP IN
C IN
Y IN
P/ON
J (TERMINAL SWITCHING)
V TV IN
L IN
R IN
R OUT
G OUT
B OUT
BLK
MODE1
MODE2
MODE
BLK
V OUT
IC1402 VIDEO OUT CL AMP
SCART 1
L OUT
R OUT
R IN
G IN
B IN
V IN
L IN
R IN
V OUT
Q401 V OUT BUFF I
SCART 2
L OUT
R OUT
V IN
L IN
R IN
MODE
COLOR IN
FRONT/REAR
Q1410 F/R INV
AV(F) IN
Y(F) IN
C(F) IN
L(F) IN
R(F) IN
J1401 VIDEO3 REAR
IC1401 SOURCE SELECT
V TV IN
A TV L IN
A TV R IN
V I IN
A1 L IN
A1 R IN
V 2 IN
A2 L IN
A2 R IN
V 3 IN
A3 L IN
A3 R IN
A TV L OUT
A TV R OUT
A2 L OUT
A2 R OUT
SDA
VI OUT
VI L OUT
VI R OUT
V TV OUT
V2 OUT
IC203 HEAD PHONE SOUND CONTROLLER
L IN
R IN
SDA
SCL
L OUT
R OUT
SUBS
IC204 HEAD PHONE AMP
H/P L OUT
H/P R OUT
J1401
L
R
Q1402 V OUT BUFF 2
IC201 MAIN SOUND CONTROLLER
L IN
R IN
AF 2 IN
AF 1 IN
L OUT
R OUT
SDA
SCL
LED 1
LED 2
4 LEVEL
Q202 AUDIO AMP 2
Q201 AUDIO AMP 1
IC1404 VIDEO-Y/C SW
V IN
Y IN
C IN
V IN
Y IN
C IN
V OUT
Y OUT
C OUT
IC202 F/R AUDIO SW
0Y
0X
3X
3Y
Y
X
L OUT
R OUT
Q1406,1407 Y. COLOR AMP I
IC1403 MAIN VIDEO Y/C SW
Z0
Y0
Z1
YI
X0
X
Z
A
C
B
Q1404 COLOR OUT BUFF
Q1403 Y-OUT BUFF
Q1408,1409 Y COLOR AMP I
IC405 AV-SELECT
0Y
3Y
2Y
V PIP OUT
PIP AV/YC
PIP V2/V3
C OUT
Y OUT
AV/YC SW
V2/V3 SW
R IN
L IN
SUBS IN
SDA I IN
SCL
V OUT
L OUT
R OUT
LED A OUT
LED B OUT
4 LEVEL
H1 (1/2)
LS L OUT
H/P L IN
H/P R IN
LS R OUT
FOR FUTURE PURPOSE
54-70
J
27-46.53
3.4.7.9.10.24-26
12-14.17-20
A
P
B
F
G (POWER SUPPLY)
T601 CMC
Q601,602 CON OUT1,2
T603 PIT
T602 PRT
D603 38V RECT
D605,606 15V RECT
D609 135V RECT
+38V
+15V
+7V
+135V
300V
IC601 OUP CONTROL
Q603,604 CURRENT LIM1,2
Q673 RL DRIVE
OVP
12V
Q675 ST.BY SW
Q672 ST.BY SW
ST.BY

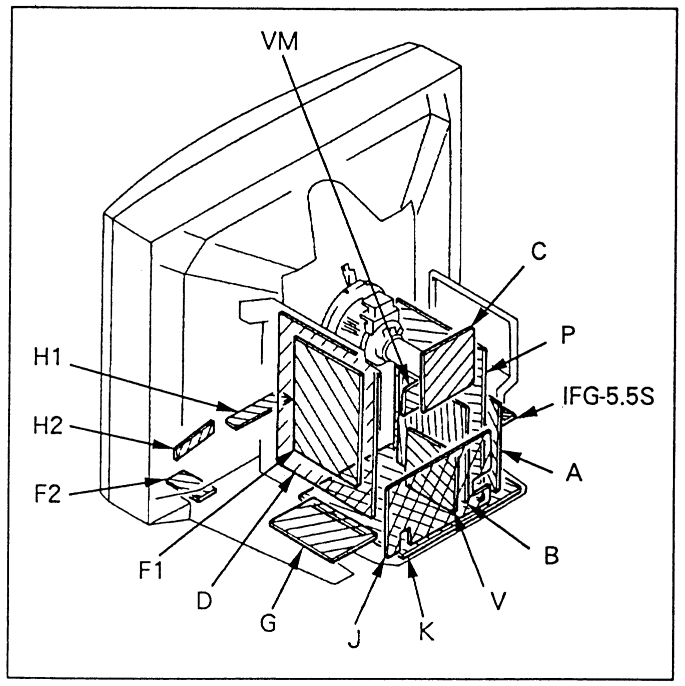
BLOCK DIAGRAM (3)


H1 (CONTROL SWITCH) (1/2)
R(F)OUT
L(F)OUT
HI-902 R
HI-903 L
FRONT/REAR
AV(F)OUT
HI-904 VIDEO
HI-905 YC
Y(F)OUT
C(F)OUT
S901 MODE
S903 −
S902 +
LC3
LC2
LC1
H2 (SIRCS RECIVER INDICATOR)
+5V
D951
D952
D954
LED A
LED B
RES LED
IC951 SIRCS RECIVER
SIRCS
J
A
P
B
F
K (INTEROFCE MICRO-CONTROLLER AUDIO)
IC1004 INPUT MULTIPLEXER
MODE 1
MODE 2
SCL
MODE SW Q1008
MODE SW Q1007
INPUT MULTIPLEXER
C1
C2
C4
SW Q1001
IC1007 I²C SW PIP ENABLE
INH
Z-COM
Y-COM
X-COM
IC1005 MEMORY
SDA
RES
PIP ENB
50/60Hz
SDA 2 OUT
SDA 1 OUT
AFT
IC1003 AFT COMP
VIDEO TV IN
VIDEO TV OUT
V-TV BUFF Q1003
SYNC SEP Q1004
IC1251 AUDIO OUT
L-CH
L IN
L OUT
MUTE Q1251
MUTE Q1009
MUTE Q1271
+15V
IC1261 AUDIO OUT
R-CH
R IN
R OUT
MUTE Q1261
V PULSE OUT
ST. BY
IC1001 CONTROL
MUXI
MUX2
SIRCS
RES LED
ON BLK
BLK SW Q1002
Y/C SW Q1005
V2/V3 SW Q1006
PIP V2/V3 SW Q1061
PIP/YC SW Q1060
BLK
V2/V3
PIP V2/V3
PIP Y/C
ST BY
PIP
PIPEN
AFT L
AFT H
SYNC
HUE
TDA
TCL
CSD H
VCR
OSD V
OSD OUT
XTAL 1
XTAL 2
CF1001 12MHz
MUTE
LED A
LED B
LED B IN
LED A IN
BLK OUT
AV/Y-C SW
Y/C SW
PIP AV/YC
ST. BY
HUE
TXD
CLK
H PULSE
V PULSE
CHR
ON PIC
S-TV
S-TV OUT
VIDEO IN
VIDEO OUT
R IN
TEXT R
G IN
TEXT G
B IN
TEXT B
PIC ABL IN
ABL
BLK IN
+BLK
SSCP IN
SSCP OUT
SSCP
V (TELE TEXT)
IC03 EURO CCT
BLK-OUT Q07
B OUT Q09
G OUT Q10
R OUT Q11
B OUT
G OUT
R OUT
P/ON
TV
TXD
IC01 MICRO CONTROLLER
T.DAT
TCLK
OSC1
OSC2
X3
RESET
INV Q14
PIC LEVEL Q05
ST BY Q03
REG +5V Q01
REG +12V Q02
+5V
+7V
+15V
+12V
D0
D7
OE
WE
A0
A10
A11
A12
TTD
TTC
F6
VCS
OUT
TCS
SCS
S-TV IN
PIC ABL OUT
SSCP OUT
ON PIC
50/60 OUT
BLK OUT
H. PULSE
V. PULSE
PIC. ABL. OUT Q1608
IC501 JUNGLE
V. ZOOMING Q502
V. RAMP GEN
SCP OUT
MUTING 50/60
O2
FBP IN
HD OUT
V-BLK OUT
VIDEO IN
SAFETY IN
O1
VCO OUT
VCO IN
SAFETY V-BLK
VD OUT
CF501
VIDEO AMP Q591
INVERTOR Q592
50/60 SW Q501
50/60 LIN SW Q509,510
-BLK Q507
RV502 H-PHASE
RV1506 V.CENT
V CENT Q505,506
+135V
PIN MOD D1552
RV1504 H.SIZE
FBP. BUFF-1 Q1701
RV1701 H.TILT
IC1701 COMPARATOR
CURRENT AMP Q1708
CONT. SW Q1703
IC503 REG +12V
ST BY
IN
IC1704 REG +12V
IC1501 PIN OUT
USCITA PILOTA SPICOLO Q1551,1552
X IN 2
X IN 1
X OUT
COMP
RV1505 CORNE COR
RV1505 CORNER COR
RV1503 PIN AMP


V (TELE TEXT)
BLK
B OUT
G OUT
R OUT
P/ON
TV
TXD
CLK
ST BY
78
77
76
75
53
73
74
72
BLK-OUT Q07
B OUT Q09
G OUT Q10
R OUT Q11
IC01 MICRO CONTROLLER
P/ON
TV
T.DAT
TCLK
OSC1
OSC2
SDA
SCL
RESET
X3
+5V
INV Q14
PIC LEVEL Q05
ST BY Q03
REG +5V Q01
REG +12V Q02
+7V
+15V
+12V
IC03 EURO CCT
IC04 8kB STATIC RAM
D0
D7
OE
WE
A0
A7
A8
A9
A10
A11
A12
SDA
SCL
TTD
TTC
F6
VCS
OUT
IN
TCS
SCS
IC02 VIDEO PROCESSOR
VIDEO IN
SYNC
OSC OUT
OSC IN
CLOCK X'TAL
SYNC-BUFF Q04
X01
X02
SYNC TV
C (R.G.B OUT)
A/C OUT
R IN
G IN
B IN
34
29
30
31
28
R.G.B A/C Q704,707,710
R.G.B AMP Q702,705,708
R.G.B OUT Q703,706,709
R.G.B OUT
R.G.B
RV703 G-DRIVE
RV704 R-DRIVE
V901 PICTURE TUBE
H.
H.V.
G2
VM (VM AMP)
Q.P. +
Q.P. −
+28V
C. PROTECT Q756,757
VM COIL
VM IN
VM AMP Q751−753
VM OUT Q754,755
VM OUT
D (JUNGL, 50/60 SW, PIN AMP. H·V OUT, COMPAPATOR.)
S-TV IN
PIC ABL OUT
VCR
SSCP OUT
ON PIC
50/60 OUT
BLK OUT
H. PULSE
V. PULSE
PIC. ABL. OUT Q1608
V. ZOOMING Q502
IC501 JUNGLE
V. RAMP GEN
VCR
SCP OUT
MUTING 50/60
O2
FBP IN
HD OUT
V-BLK OUT
VIDEO IN
SAFETY IN
O1
VCO OUT
VCO IN
SAFETY V-BLK
VD OUT
CF501
VIDEO AMP Q591
VIDEO AMP Q598
+B DET-2 Q807
+B1 DET Q806
50/60 SW Q501
INVERTOR Q592
50/60 LIN SW Q509,510
-BLK Q507
V CENT Q505,506
RV502 H-PHASE
RV1506 V.CENT
+12V
IC502 V OUT
REF
IN
OUT
RV1507 V. SIZE
RV1509
V. ANGLE
+V. DY
+O. DY
−O. DY
−V. DY
CY−
CY+
+135V
PIN MOD D1552
RV1504 H.SIZE
FBP. BUFF-1 Q1701
RV1701 H. TILT
IC1701 COMPARATOR
CURRENT AMP Q1708
CONT. SW Q1703
INVETURE Q1704
CURRENT SOURCE Q1705
DC. CLUMP Q1706
IC1702 FUNCTION
V. PARABOLA OUT Q1707
VP. AMP Q1717
V.PARA.EQ Q1711
RV1705 Y. CROSS
V.P. BUFF Q1712
V. PARABOLA AMP Q1709
Y-BOE SW Q1716
RV1702 Y. BOW
IC1501 PIN OUT
USCITA PILOTA SPICOLO Q1551,1552
OUT
X IN 2
X IN 1
X OUT
COMP
RV1505 CORNE COR
RV1505 CORNER COR
RV1503 PIN AMP
IC503 REG +12V
ST BY
+15V
IC1704 REG +12V
E
CND801 H.CENT
RV1704 H.AMP
H. AMP Q1710
RV1703 C. BOW
H. DRIVE Q805
T801 H.D.T
H.OUT Q804
G2 RECT D803
+200V
+28V
+15V
200V RECT D802
28V RECT D801
15V RECT D850
T802 F.B.T.
HV
FV
H1,H2
H. V.
F. V.
G2


34
A/C OUT
R.G.B A/C
Q704,707,710
29
30
31
R IN
G IN
B IN
R.G.B AMP
Q702,705,708
R.G.B OUT
Q703,706,709
R.G.B
OUT
R.G.B
V901
PICTURE TUBE
H.
H.V.
G2
RV703
G-DRIVE
RV704
R-DRIVE
C (R.G.B OUT)
VM (VM AMP)
VIDEO IN
SYNC TV
Q.P. +
Q.P. −
Q.P. +
Q.P. −
+28V
C.PROTECT
Q756,757
VM COIL
28
VM IN
VM AMP
Q751−753
VM OUT
Q754,755
VM OUT
D (JUNGL, 50/60 SW, PIN AMP. H·V OUT, COMPAPATOR.)
+V. DY
+O. DY
−O. DY
−V. DY
DY
CY−
CY+
T802 F.B.T.
IC1702 FUNCTION
V.PARABOLA OUT
Q1707
CND801
H.CENT
+200V
200V RECT
D802
+28V
28V RECT
D801
+15V
15V RECT
D850
H1,H2
H.V.
F.V.
HV
FV
+12V
RV1704
H.AMP
H.AMP
Q1710
RV1703
C. BOW
RV1702
Y. BOW
T801
H.D.T
H.DRIVE
Q805
H.OUT
Q804
G2 RECT
D803
G2

5-2. CIRCUIT BOARDS LOCATION


VM
C
P
H1
IFG-5.5S
H2
A
F2
F1
B
D
V
G
J
K

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ✱	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

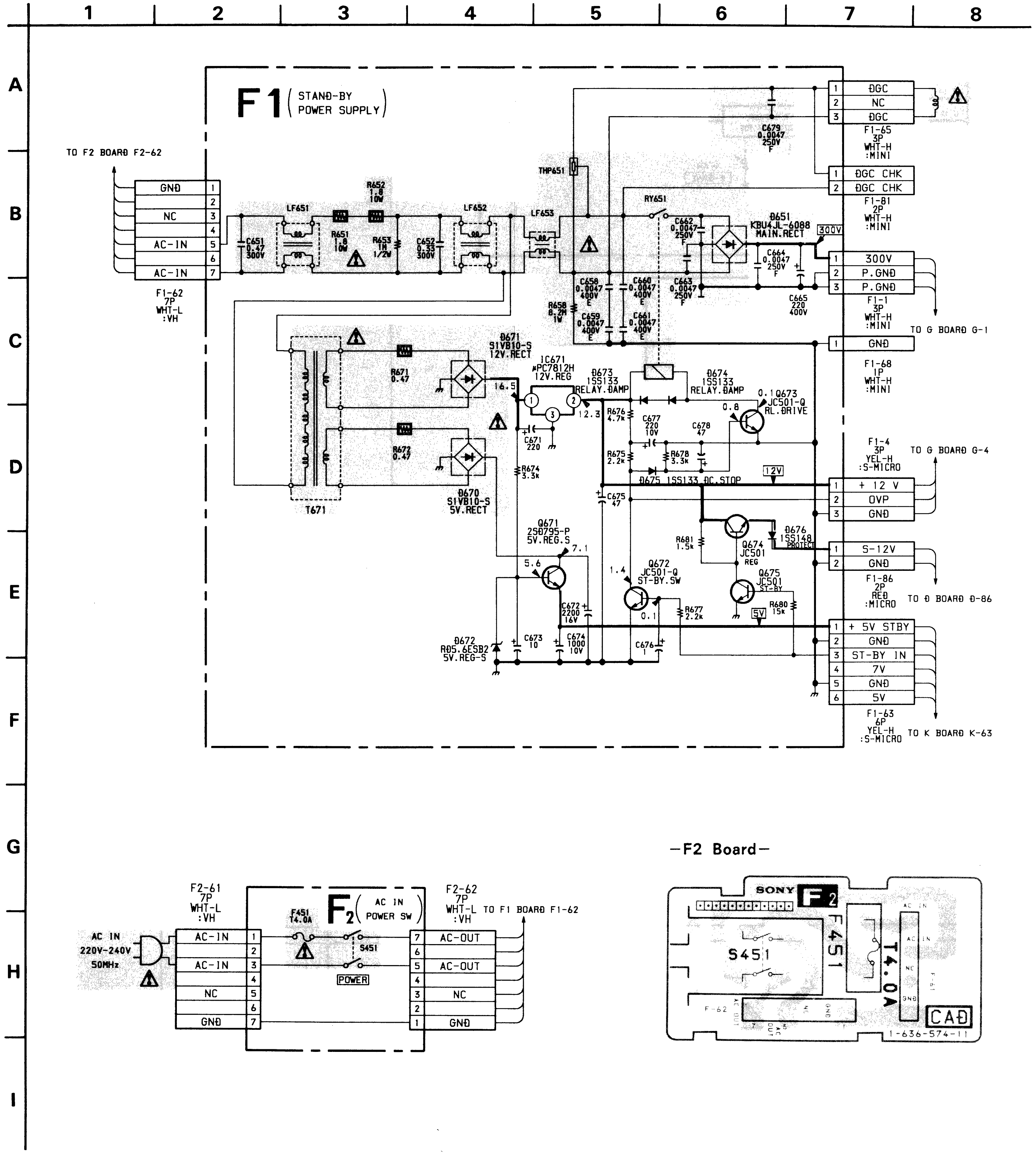
Note :

- All capacitors are in μF unless otherwise noted.
  pF : μμF 50WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch :	5mm
Rating electrical power :	1／4W

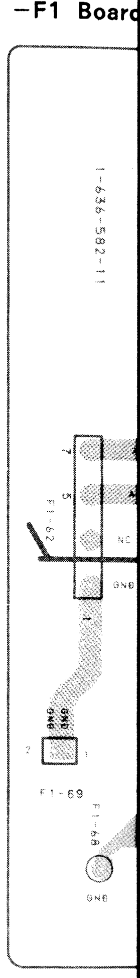
- Chip resistor is in 1／10W.
- All resistors are in ohms. kΩ = 1000Ω, MΩ = 1000k Ω
- ⊞ : nonflammable resistor.
- ▭ : fusible resistor.
- △ : internal component.
- ☐ : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B.unless otherwise noted.
- All voltages are in V.
- Readings are taken with a 10MΩ digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ▬ : B + line.
- ░ : signal path

5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

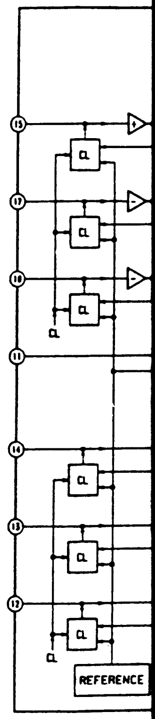

1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
F1 (STAND-BY POWER SUPPLY)
TO F2 BOARD F2-62
GND
NC
AC-IN
AC-IN
F1-62 7P WHT-L :VH
LF651
R652 1.8 10W
R651 1.8 10W
R653 1M 1/2W
C651 0.47 300V
C652 0.33 300V
LF652
LF653
THP651
RY651
C662 0.0047 250V F
D651 KBU4JL-6088 MAIN.RECT
300V
C664 0.0047 250V F
C665 220 400V
C658 0.0047 400V E
C659 0.0047 400V E
C660 0.0047 400V E
C661 0.0047 400V E
C663 0.0047 250V F
R658 8.2M 1W
C679 0.0047 250V F
DGC
NC
DGC
F1-65 3P WHT-H :MINI
DGC CHK
DGC CHK
F1-81 2P WHT-H :MINI
300V
P.GND
P.GND
F1-1 3P WHT-H :MINI
TO G BOARD G-1
GND
F1-68 1P WHT-H :MINI
T671
R671 0.47
R672 0.47
D671 S1VB10-S 12V.RECT
D670 S1VB10-S 5V.RECT
IC671 μPC7812H 12V.REG
16.5
12.3
C671 220
R674 3.3k
D673 1SS133 RELAY.DAMP
D674 1SS133 RELAY.DAMP
Q673 JC501-Q RL.DRIVE
0.1
0.8
R676 4.7k
C677 220 10V
C678 47
R675 2.2k
R678 3.3k
D675 1SS133 DC.STOP
12V
F1-4 3P YEL-H :S-MICRO
TO G BOARD G-4
+ 12 V
OVP
GND
C675 47
Q671 2SD795-P 5V.REG.S
7.1
5.6
R681 1.5k
Q674 JC501 REG
D676 1SS148 PROTECT
S-12V
GND
F1-86 2P RED :MICRO
TO D BOARD D-86
Q672 JC501-Q ST-BY.SW
1.4
0.1
Q675 JC501 ST-BY
R680 15k
R677 2.2k
5V
C672 2200 16V
D672 RD5.6ESB2 5V.REG-S
C673 10
C674 1000 10V
C676 1
+ 5V STBY
GND
ST-BY IN
7V
GND
5V
F1-63 6P YEL-H :S-MICRO
TO K BOARD K-63
AC IN 220V-240V 50MHz
F2-61 7P WHT-L :VH
AC-IN
AC-IN
NC
GND
F451 T4.0A
F2 (AC IN POWER SW)
S451
POWER
F2-62 7P WHT-L :VH
TO F1 BOARD F1-62
AC-OUT
AC-OUT
NC
GND
-F2 Board-
SONY
F2
F451
T4.0A
S451
AC IN
NC
GND
F-62
AC OUT
CAD
1-636-574-11

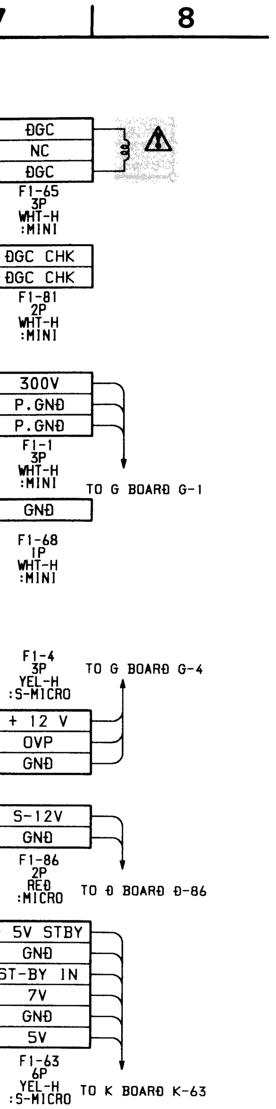
F1

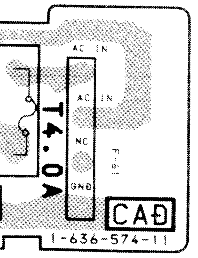
-F1 Board


1-636-582-11
F1-62
NC
GND
F1-69
F1-68
GND

B BOARD

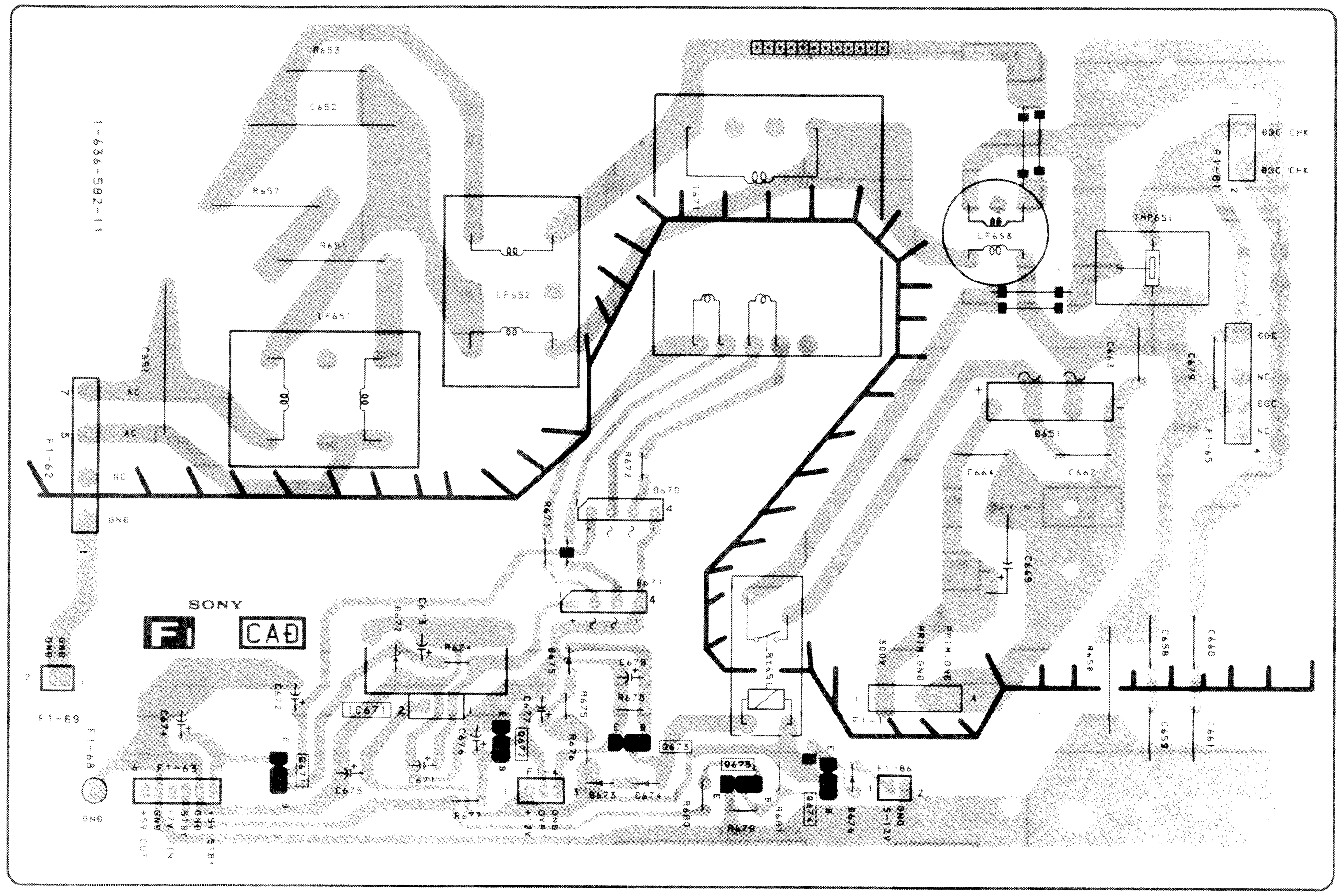



7
8
ĐGC
NC
ĐGC
F1-65
3P
WHT-H
:MINI
ĐGC CHK
ĐGC CHK
F1-81
2P
WHT-H
:MINI
300V
P.GNĐ
P.GNĐ
F1-1
3P
WHT-H
:MINI
TO G BOARĐ G-1
GNĐ
F1-68
1P
WHT-H
:MINI
F1-4
3P
YEL-H
:S-MICRO
TO G BOARĐ G-4
+ 12 V
OVP
GNĐ
S-12V
GNĐ
F1-86
2P
REĐ
:MICRO
TO B BOARĐ B-86
5V STBY
GNĐ
ST-BY IN
7V
GNĐ
5V
F1-63
6P
YEL-H
:S-MICRO
TO K BOARĐ K-63

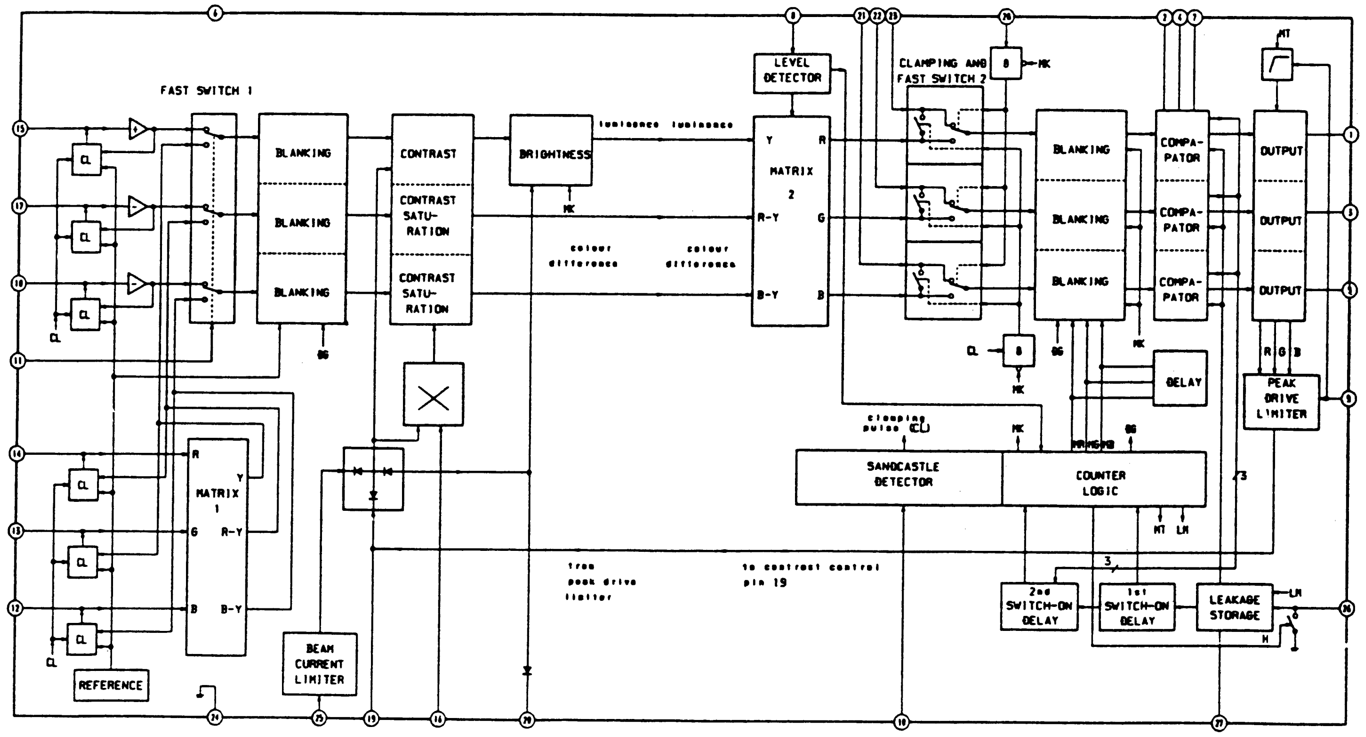

AC IN
AC IN
NC
GNĐ
F-61
T4.0A
CAĐ
1-636-574-11

F1 [STAND-BY, POWER SUPPLY] F2 [AC IN, POWER SW] B [VIDEO PROCESSOR, Y/C SWITCH COLOR PROCESSOR, SHARPNESS CONTROL]

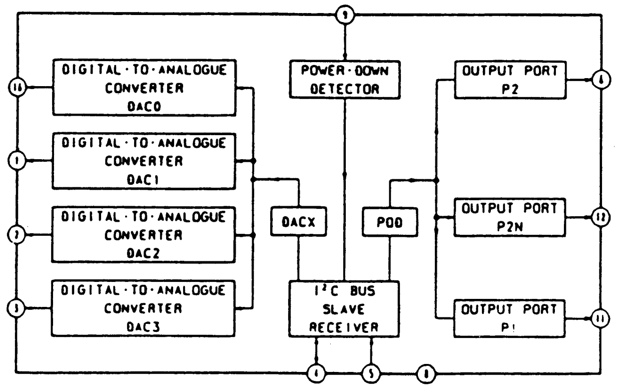
-F1 Board-


1-636-582-11
R653
C652
R652
R651
LF651
LF652
LF653
THP651
D651
C651
C663
C664
C662
C665
C679
F1-81
F1-65
F1-62
F1-69
F1-68
F1-63
F1-4
F1-86
F1-1
ĐGC CHK
ĐGC
NC
AC
GNĐ
SONY
F
CAĐ
IC671
IC672
R672
R674
R675
R676
R678
C673
C676
C678
Q675
R679
Q674
R677
D673
S-12V
GNĐ
C658
C659
C660
C661

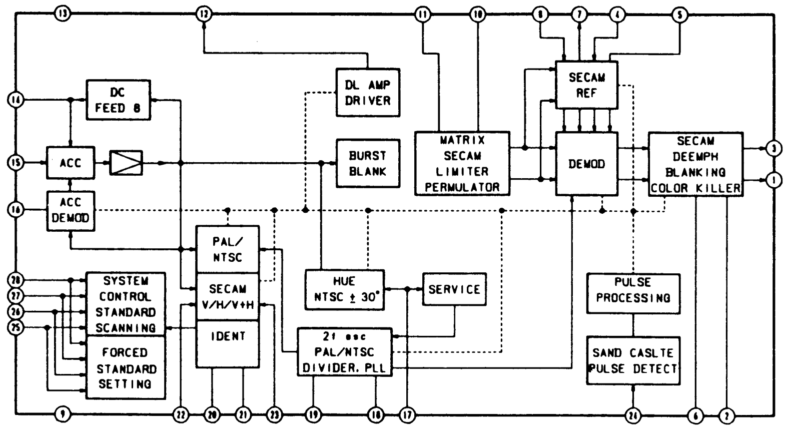
B BOARD IC301 TDA4580-V4


FAST SWITCH 1
CL
BLANKING
CONTRAST
CONTRAST SATU-RATION
BRIGHTNESS
luminance
colour difference
LEVEL DETECTOR
MATRIX 2
Y
R-Y
B-Y
R
G
B
CLAMPING AND FAST SWITCH 2
BLANKING
COMPA-PATOR
OUTPUT
PEAK DRIVE LIMITER
DELAY
SANDCASTLE DETECTOR
COUNTER LOGIC
clamping pulse
MATRIX 1
REFERENCE
BEAM CURRENT LIMITER
from peak drive limiter
to contrast control pin 19
2nd SWITCH-ON DELAY
1st SWITCH-ON DELAY
LEAKAGE STORAGE

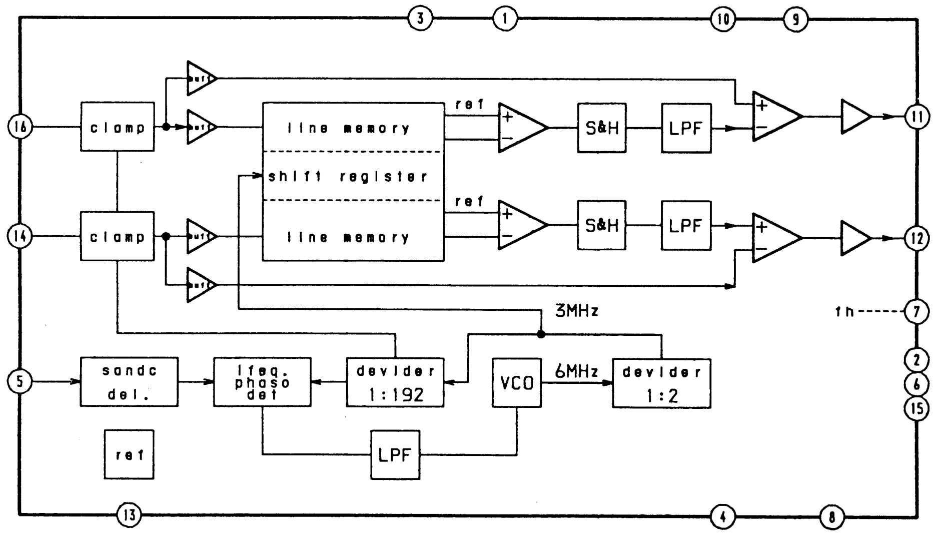
B BOARD IC302 TDA8442-N3


DIGITAL-TO-ANALOGUE CONVERTER DAC0
DIGITAL-TO-ANALOGUE CONVERTER DAC1
DIGITAL-TO-ANALOGUE CONVERTER DAC2
DIGITAL-TO-ANALOGUE CONVERTER DAC3
POWER-DOWN DETECTOR
DACX
POD
I²C BUS SLAVE RECEIVER
OUTPUT PORT P2
OUTPUT PORT P2N
OUTPUT PORT P1

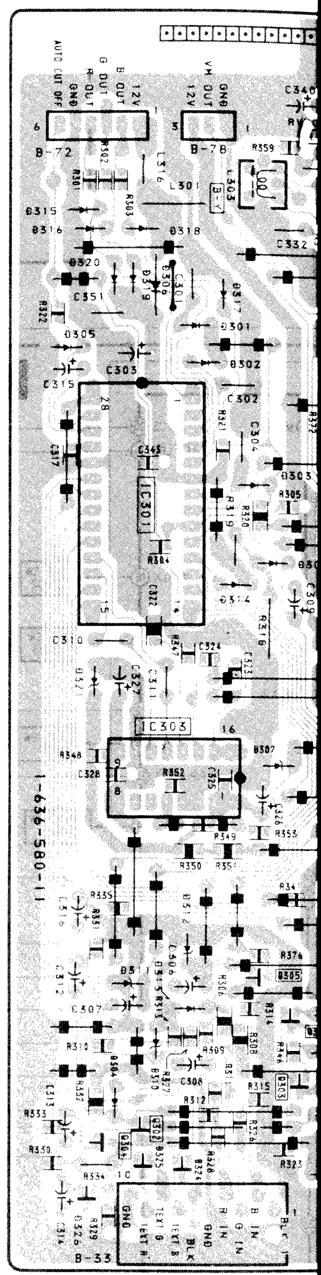
B BOARD IC304 TDA4650


DC FEED 8
ACC
ACC DEMOD
DL AMP DRIVER
BURST BLANK
MATRIX SECAM LIMITER PERMULATOR
SECAM REF
DEMOD
SECAM DEEMPH BLANKING COLOR KILLER
PAL/NTSC
SECAM V/H/V+H
IDENT
HUE NTSC ± 30°
SERVICE
2f osc PAL/NTSC DIVIDER, PLL
PULSE PROCESSING
SAND CASLTE PULSE DETECT
SYSTEM CONTROL STANDARD SCANNING
FORCED STANDARD SETTING

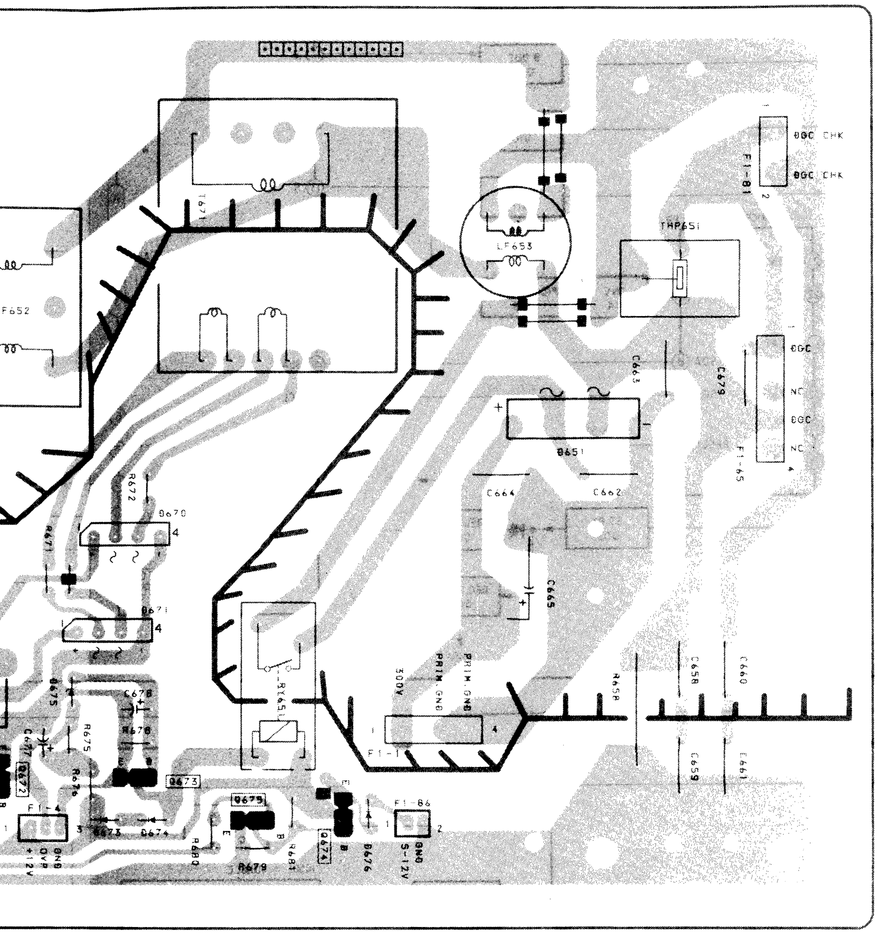
B BOARD IC303 TDA4660


clamp
line memory
shift register
ref
S&H
LPF
3MHz
6MHz
fh
sandc del.
ifreq. phase det
devider 1:192
VCO
devider 1:2
LPF
ref

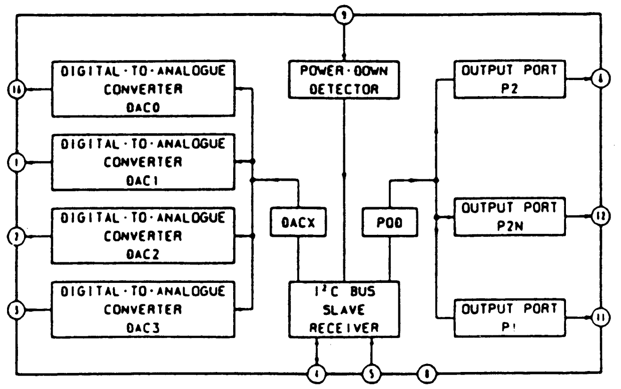
-B Board-


1-636-580-11
IC301
IC303
B-72
B-78
B-33
C303
C302
C351
C332
L301
R352
GNĐ
BLK

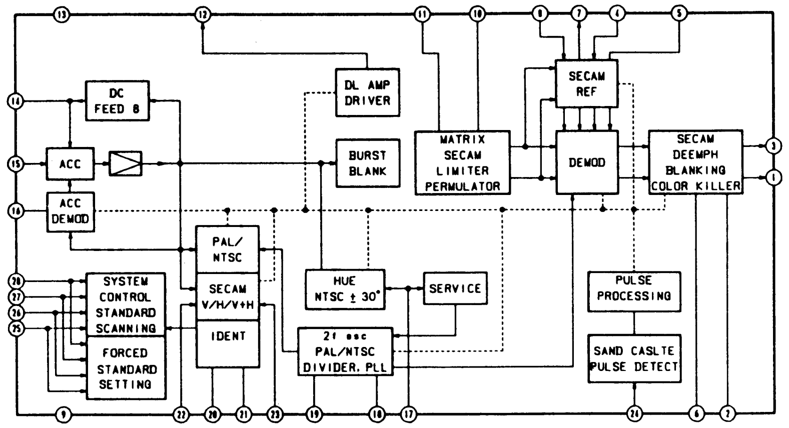
AC IN, POWER SW] **B** [VIDEO PROCESSOR, Y/C SWITCH COLOR PROCESSOR, SHARPNESS CONTROL]

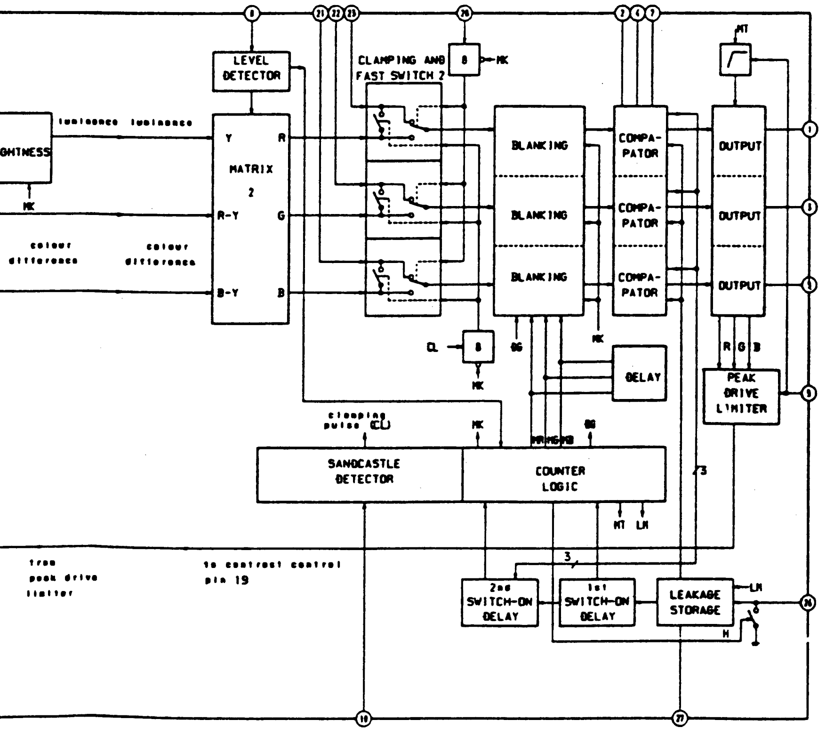

LF653
LF652
THP651
D651
C664
C662
C665
C663
C679
PRIM GND
500V
F1-1
F1-81
F1-86
F1-45
R672
D670
R671
R675
R676
D673
D674
D679
R679
R680
R681
S-12V
EGC
NC
ECC CHK
EOC CHK

B BOARD IC302 TDA8442-N3

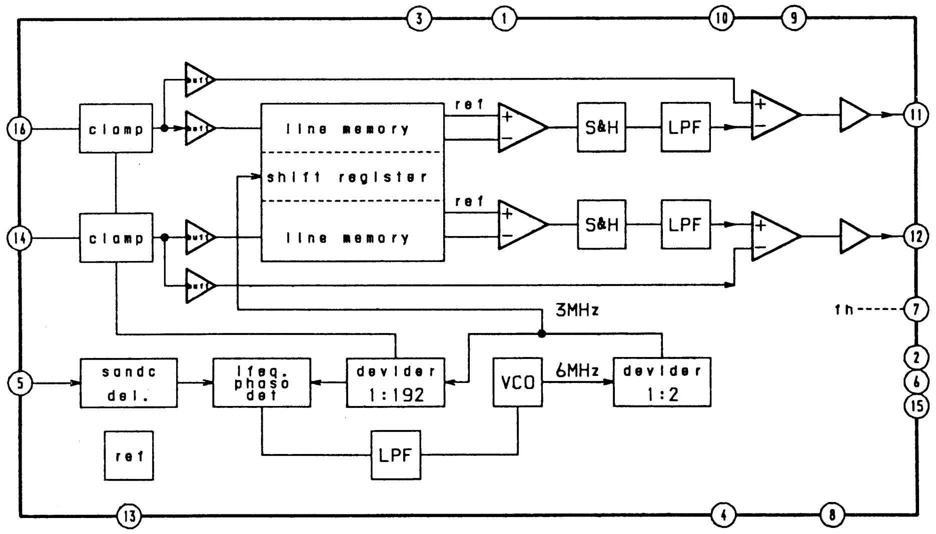

DIGITAL-TO-ANALOGUE CONVERTER DAC0
DIGITAL-TO-ANALOGUE CONVERTER DAC1
DIGITAL-TO-ANALOGUE CONVERTER DAC2
DIGITAL-TO-ANALOGUE CONVERTER DAC3
POWER-DOWN DETECTOR
DACX
POD
I²C BUS SLAVE RECEIVER
OUTPUT PORT P2
OUTPUT PORT P2N
OUTPUT PORT P1
9
10
1
2
3
4
5
8
6
12
11

B BOARD IC304 TDA4650

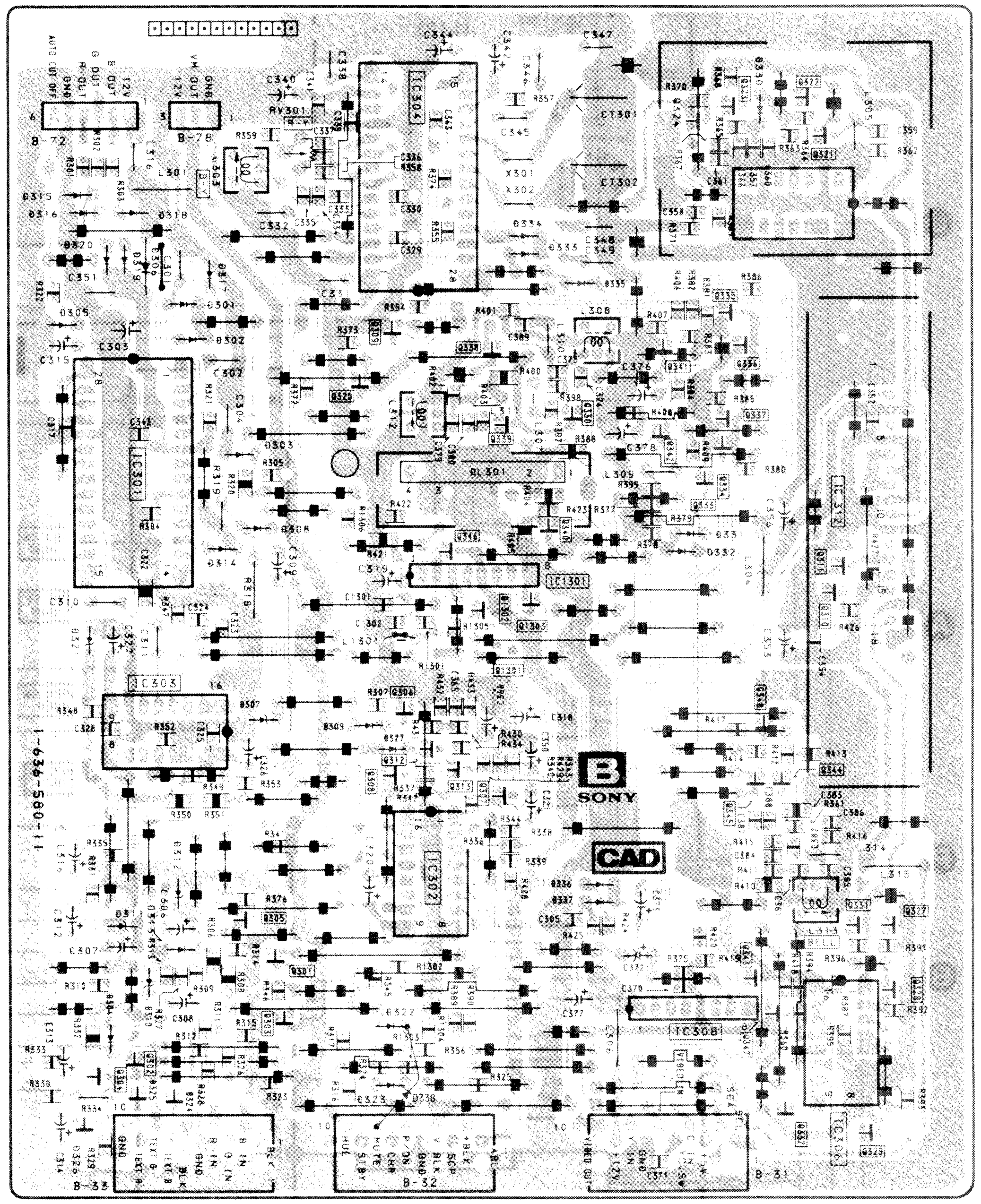

DC FEED 8
ACC
ACC DEMOD
DL AMP DRIVER
BURST BLANK
MATRIX SECAM LIMITER PERMULATOR
SECAM REF
DEMOD
SECAM DEEMPH BLANKING COLOR KILLER
PAL/NTSC
SECAM V/H/V+H
IDENT
HUE NTSC ± 30°
SERVICE
2f osc PAL/NTSC DIVIDER, PLL
PULSE PROCESSING
SAND CASLTE PULSE DETECT
SYSTEM CONTROL STANDARD SCANNING
FORCED STANDARD SETTING

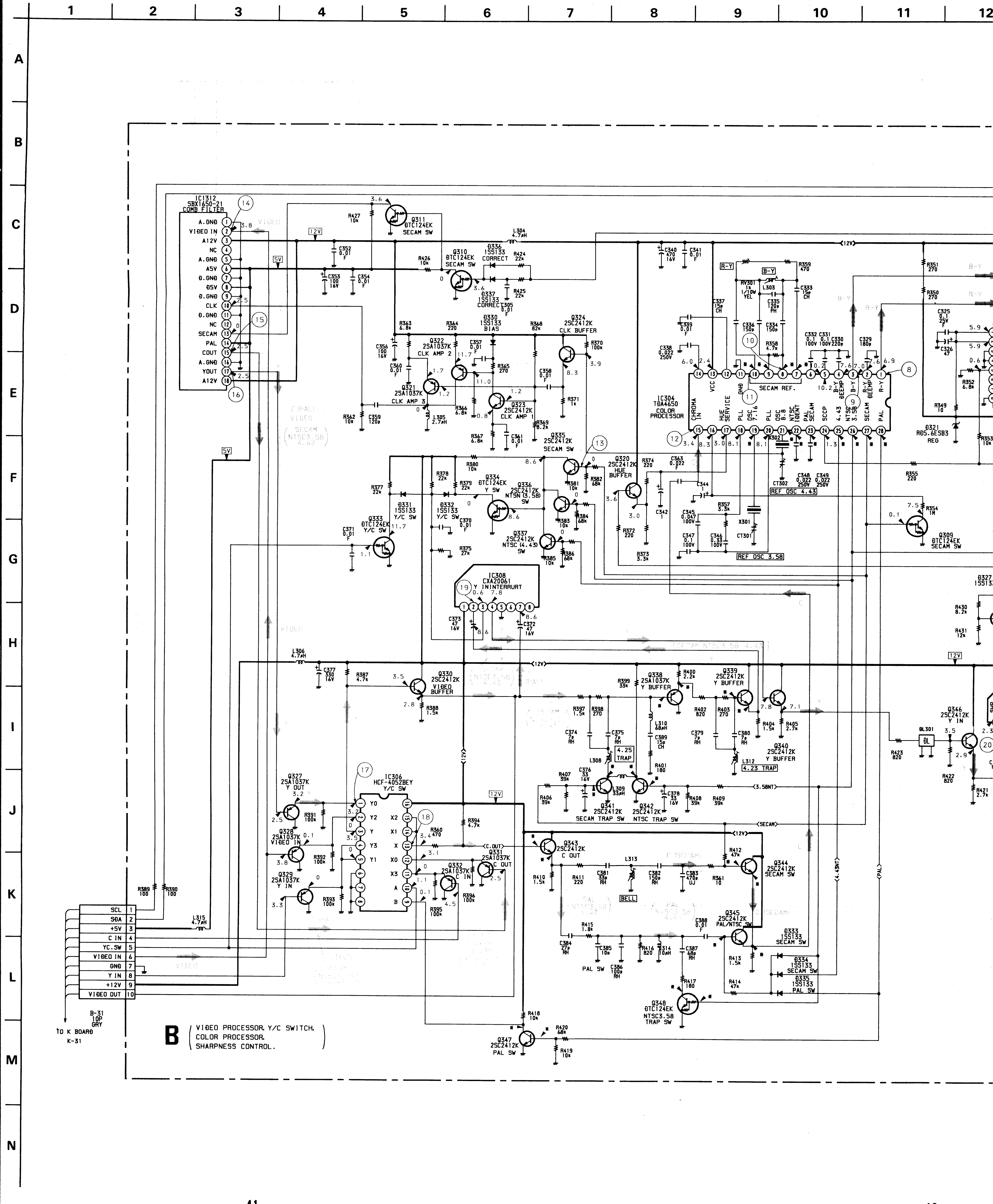

LEVEL DETECTOR
CLAMPING AND FAST SWITCH 2
MATRIX 2
luminance
colour difference
BLANKING
COMPA-PATOR
OUTPUT
PEAK DRIVE LIMITER
DELAY
SANDCASTLE DETECTOR
COUNTER LOGIC
2nd SWITCH-ON DELAY
1st SWITCH-ON DELAY
LEAKAGE STORAGE
clamping pulse
from peak drive limiter
to contrast control pin 19

B BOARD IC303 TDA4660

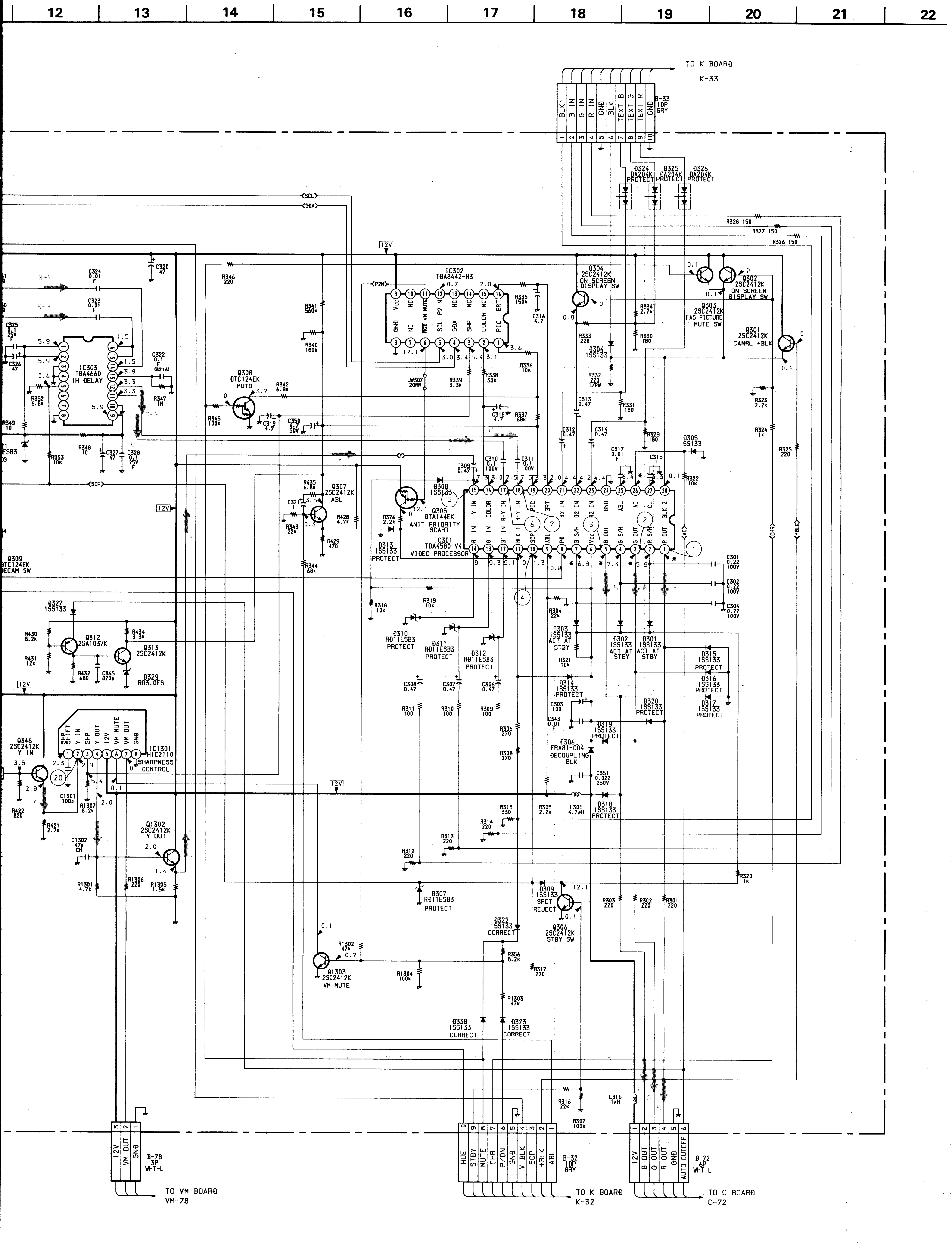

clamp
line memory
shift register
ref
S&H
LPF
3MHz
fh
sandc del.
lfeq. phase det
devider 1:192
VCO
6MHz
devider 1:2
ref
LPF
3
1
10
9
16
14
11
12
7
2
6
15
5
13
4
8

–B Board–

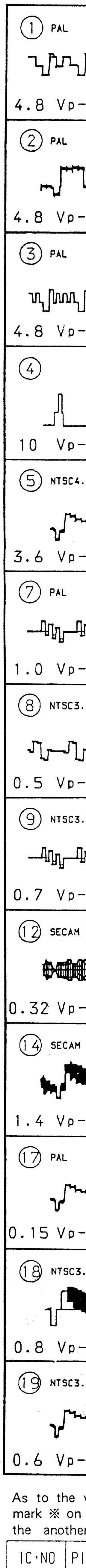

B SONY
CAD
IC301
IC302
IC303
IC304
IC308
IC1301
BL301
1-636-580-11
B-72
B-78
B-33
B-32
B-31


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
K
L
M
N
IC1312 SBX1650-21 COMB FILTER
A.GND
VIDEO IN
A12V
NC
A.GND
A5V
D.GND
D5V
D.GND
CLK
D.GND
NC
SECAM
PAL
COUT
A.GND
YOUT
A12V
Q311 DTC124EK SECAM SW
Q310 DTC124EK SECAM SW
Q336 1SS133 CORRECT
Q337 1SS133 CORRECT
L304 4.7μH
Q330 1SS133 BIAS
Q322 2SA1037K CLK AMP 2
Q321 2SA1037K CLK AMP 3
Q323 2SC2412K CLK AMP 1
Q324 2SC2412K CLK BUFFER
Q335 2SC2412K SECAM SW
Q331 1SS133 Y/C SW
Q332 1SS133 Y/C SW
Q333 DTC124EK Y/C SW
Q334 DTC124EK Y SW
Q336 2SC2412K NTSN (3.58) SW
Q337 2SC2412K NTSC (4.43) SW
Q320 2SC2412K HUE BUFFER
IC304 TDA4650 COLOR PROCESSOR
CHROMA IN
VCC
GND
SECAM REF.
HUE SERVICE
PLL
OSC 7.16
PLL
OSC 8.8
NTSC IDENT
PAL SECAM
SCCP
4.43
NTSC 3.58
SECAM
PAL
B-Y
B-Y DEEMP
R-Y DEEMP
R-Y
RV301 1k 1/10W YEL
L303
REF OSC 4.43
REF OSC 3.58
X301
CT301
CT302
Q309 DTC124EK SECAM SW
Q321 RD5.6ESB3 REG
IC308 CXA20061 Y INTERRUPT
L306 4.7μH
Q330 2SC2412K VIDEO BUFFER
Q338 2SA1037K Y BUFFER
Q339 2SC2412K Y BUFFER
Q340 2SC2412K Y BUFFER
L308
4.25 TRAP
L312
4.23 TRAP
L309 33μH
Q341 2SC2412K SECAM TRAP SW
Q342 2SC2412K NTSC TRAP SW
Q346 2SC2412K Y IN
BL301
DL
IC306 HCF-4052BEY Y/C SW
Y0
Y2
Y
Y3
Y1
X2
X1
X
X0
X3
A
B
Q327 2SA1037K Y OUT
Q328 2SA1037K VIDEO IN
Q329 2SA1037K Y IN
Q331 2SA1037K C OUT
Q332 2SA1037K C IN
Q343 2SC2412K C OUT
L313
BELL
Q344 2SC2412K SECAM SW
Q345 2SC2412K PAL/NTSC SW
Q333 1SS133 SECAM SW
Q334 1SS133 SECAM SW
Q335 1SS133 PAL SW
PAL SW
Q348 DTC124EK NTSC3.58 TRAP SW
Q347 2SC2412K PAL SW
L315 4.7μH
SCL 1
SDA 2
+5V 3
C IN 4
YC.SW 5
VIDEO IN 6
GND 7
Y IN 8
+12V 9
VIDEO OUT 10
B-31 10P GRY
TO K BOARD K-31
12V
5V
<12V>
<SECAM>
<3.58NT>
<4.43NT>
<PAL>
<C.OUT>

B (VIDEO PROCESSOR, Y/C SWITCH, COLOR PROCESSOR, SHARPNESS CONTROL.)

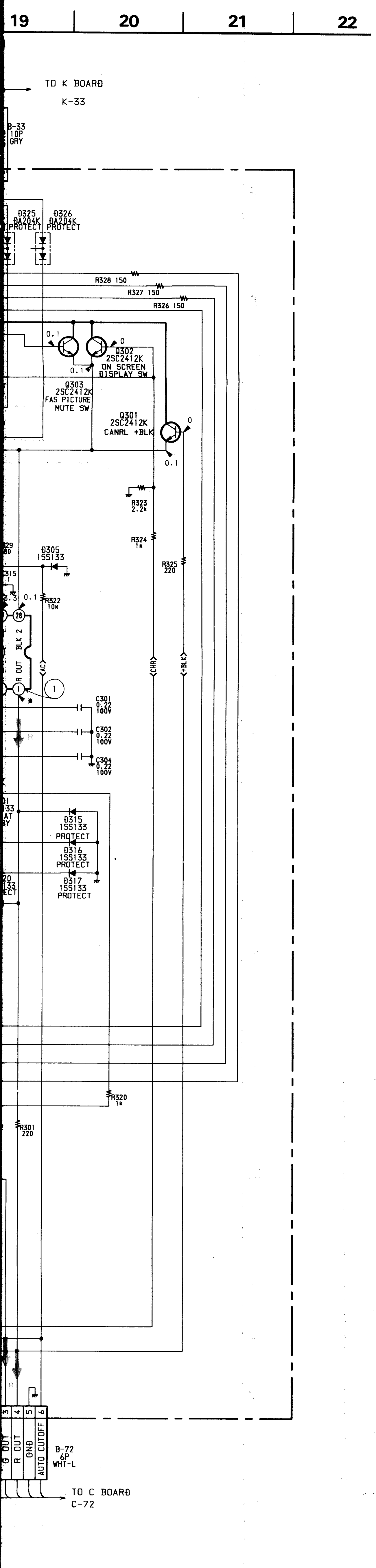

12
13
14
15
16
17
18
19
20
21
22
TO K BOARD
K-33
B-33
10P
GRY
BLK1
B IN
G IN
R IN
GND
BLK
TEXT B
TEXT G
TEXT R
GND
D324 DA204K PROTECT
D325 DA204K PROTECT
D326 DA204K PROTECT
R328 150
R327 150
R326 150
12V
IC302
TDA8442-N3
Q304
2SC2412K
ON SCREEN
DISPLAY SW
Q302
2SC2412K
ON SCREEN
DISPLAY SW
Q303
2SC2412K
FAS PICTURE
MUTE SW
Q301
2SC2412K
CANRL +BLK
IC303
TDA4660
1H DELAY
Q308
DTC124EK
MUTO
Q307
2SC2412K
ABL
Q305
DTA144EK
ANIT PRIORITY
SCART
IC301
TDA4580-V4
VIDEO PROCESSOR
D313
1SS133
PROTECT
Q309
DTC124EK
SECAM SW
D327
1SS133
Q312
2SA1037K
Q313
2SC2412K
D329
RD3.0ES
D310
RD11ESB3
PROTECT
D311
RD11ESB3
PROTECT
D312
RD11ESB3
PROTECT
D303
1SS133
ACT AT
STBY
D302
1SS133
ACT AT
STBY
D301
1SS133
ACT AT
STBY
D315
1SS133
PROTECT
D316
1SS133
PROTECT
D317
1SS133
PROTECT
D314
1SS133
PROTECT
D320
1SS133
PROTECT
D319
1SS133
PROTECT
D306
ERA81-004
DECOUPLING
BLK
D318
1SS133
PROTECT
L301
4.7µH
Q346
2SC2412K
Y IN
IC1301
HIC2110
SHARPNESS
CONTROL
Q1302
2SC2412K
Y OUT
D307
RD11ESB3
PROTECT
D309
1SS133
SPOT
REJECT
Q306
2SC2412K
STBY SW
D322
1SS133
CORRECT
Q1303
2SC2412K
VM MUTE
D338
1SS133
CORRECT
D323
1SS133
CORRECT
L316
1µH
B-78
3P
WHT-L
12V
VM OUT
GND
TO VM BOARD
VM-78
HUE
STBY
MUTE
CHR
P/ON
GND
V BLK
SCP
+BLK
ABL
B-32
10P
GRY
TO K BOARD
K-32
12V
B OUT
G OUT
R OUT
GND
AUTO CUTOFF
B-72
6P
WHT-L
TO C BOARD
C-72

• WAVEFO

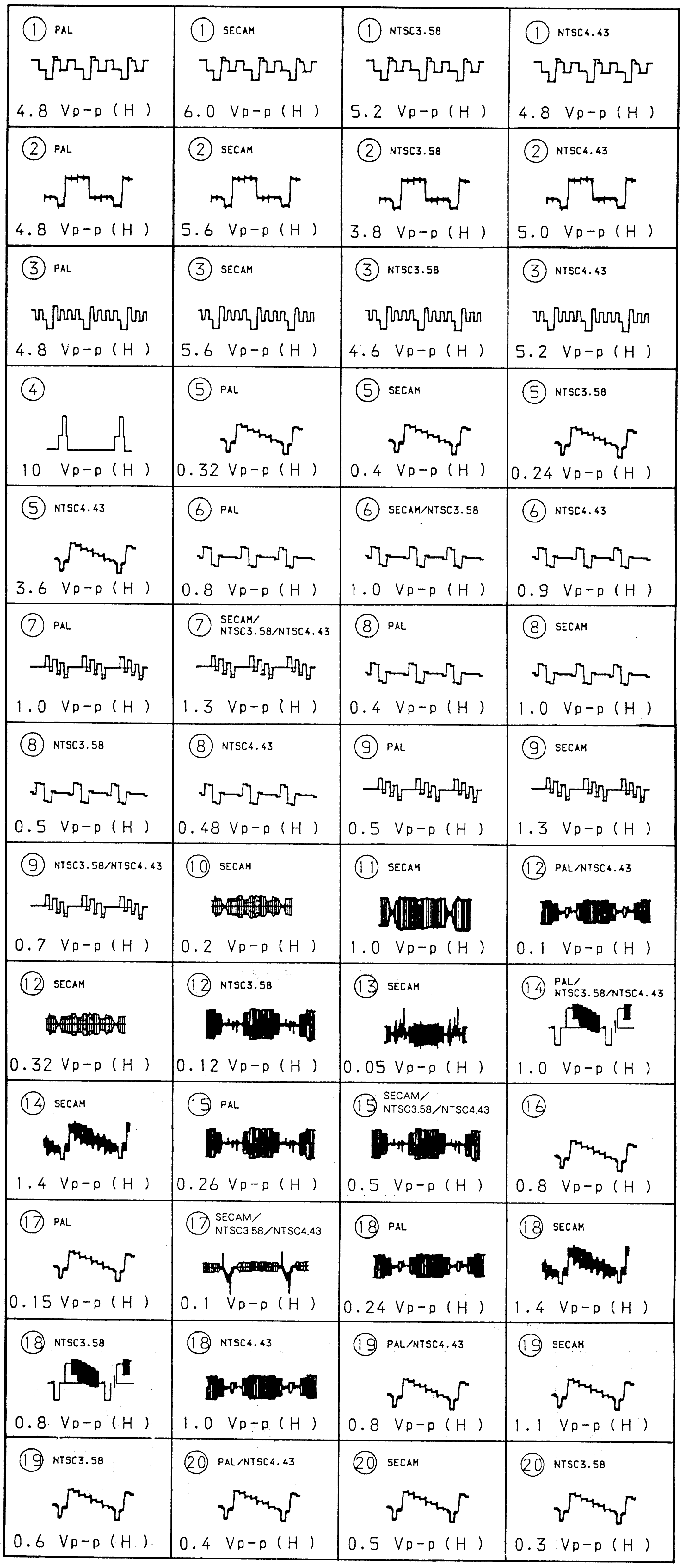


As to the
mark ※ on
the another

IC·NO	PI
IC301	
IC304	


19
20
21
22
TO K BOARD
K-33
B-33
10P
GRY
D325
DA204K
PROTECT
D326
DA204K
PROTECT
R328 150
R327 150
R326 150
Q302
2SC2412K
ON SCREEN
DISPLAY SW
Q303
2SC2412K
FAS PICTURE
MUTE SW
Q301
2SC2412K
CANRL +BLK
R323
2.2k
R324
1k
R325
220
D305
1SS133
R322
10k
BLK 2
R OUT
<AC>
<CHR>
<+BLK>
C301
0.22
100V
C302
0.22
100V
C304
0.22
100V
D315
1SS133
PROTECT
D316
1SS133
PROTECT
D317
1SS133
PROTECT
R320
1k
R301
220
G OUT
R OUT
GND
AUTO CUTOFF
B-72
6P
WHT-L
TO C BOARD
C-72

• WAVEFORMS B BOARD

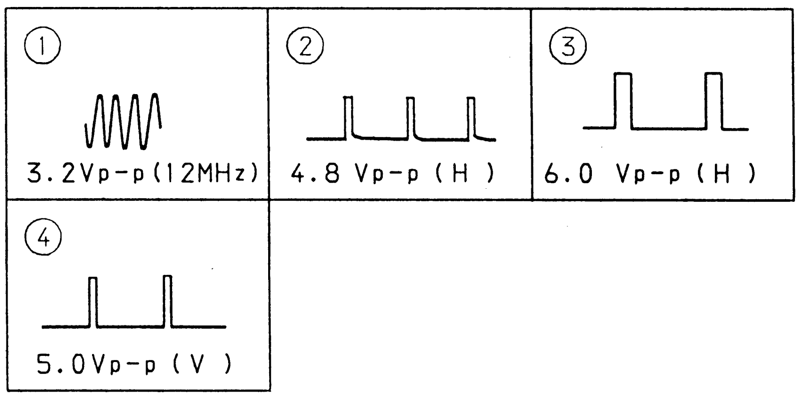

① PAL
4.8 Vp-p (H)
① SECAM
6.0 Vp-p (H)
① NTSC3.58
5.2 Vp-p (H)
① NTSC4.43
4.8 Vp-p (H)
② PAL
4.8 Vp-p (H)
② SECAM
5.6 Vp-p (H)
② NTSC3.58
3.8 Vp-p (H)
② NTSC4.43
5.0 Vp-p (H)
③ PAL
4.8 Vp-p (H)
③ SECAM
5.6 Vp-p (H)
③ NTSC3.58
4.6 Vp-p (H)
③ NTSC4.43
5.2 Vp-p (H)
④
10 Vp-p (H)
⑤ PAL
0.32 Vp-p (H)
⑤ SECAM
0.4 Vp-p (H)
⑤ NTSC3.58
0.24 Vp-p (H)
⑤ NTSC4.43
3.6 Vp-p (H)
⑥ PAL
0.8 Vp-p (H)
⑥ SECAM/NTSC3.58
1.0 Vp-p (H)
⑥ NTSC4.43
0.9 Vp-p (H)
⑦ PAL
1.0 Vp-p (H)
⑦ SECAM/NTSC3.58/NTSC4.43
1.3 Vp-p (H)
⑧ PAL
0.4 Vp-p (H)
⑧ SECAM
1.0 Vp-p (H)
⑧ NTSC3.58
0.5 Vp-p (H)
⑧ NTSC4.43
0.48 Vp-p (H)
⑨ PAL
0.5 Vp-p (H)
⑨ SECAM
1.3 Vp-p (H)
⑨ NTSC3.58/NTSC4.43
0.7 Vp-p (H)
⑩ SECAM
0.2 Vp-p (H)
⑪ SECAM
1.0 Vp-p (H)
⑫ PAL/NTSC4.43
0.1 Vp-p (H)
⑫ SECAM
0.32 Vp-p (H)
⑫ NTSC3.58
0.12 Vp-p (H)
⑬ SECAM
0.05 Vp-p (H)
⑭ PAL/NTSC3.58/NTSC4.43
1.0 Vp-p (H)
⑭ SECAM
1.4 Vp-p (H)
⑮ PAL
0.26 Vp-p (H)
⑮ SECAM/NTSC3.58/NTSC4.43
0.5 Vp-p (H)
⑯
0.8 Vp-p (H)
⑰ PAL
0.15 Vp-p (H)
⑰ SECAM/NTSC3.58/NTSC4.43
0.1 Vp-p (H)
⑱ PAL
0.24 Vp-p (H)
⑱ SECAM
1.4 Vp-p (H)
⑱ NTSC3.58
0.8 Vp-p (H)
⑱ NTSC4.43
1.0 Vp-p (H)
⑲ PAL/NTSC4.43
0.8 Vp-p (H)
⑲ SECAM
1.1 Vp-p (H)
⑲ NTSC3.58
0.6 Vp-p (H)
⑳ PAL/NTSC4.43
0.4 Vp-p (H)
⑳ SECAM
0.5 Vp-p (H)
⑳ NTSC3.58
0.3 Vp-p (H)

As to the voltage volue shown by the mark ※ on the Schematic Diagram, see the another list.

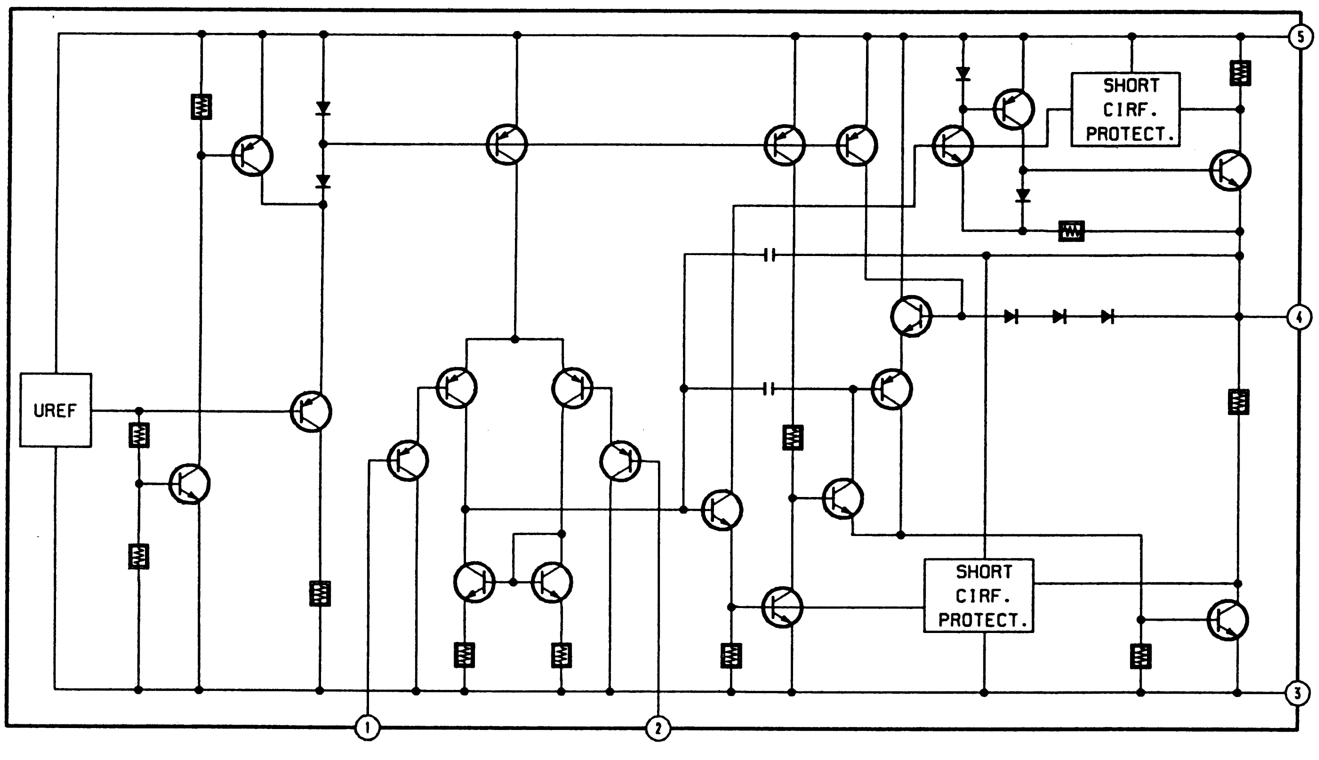
IC·NO	PIN·NO	PAL	SECAM	NTSC 3.38	NTSC 4.43
IC301	①	3.7	4.1	3.3	3.7
	③	5.4	5.7	5.0	5.4
	⑤	5.5	5.8	5.1	5.5
	⑧	0.1	0.1	6.0	0.1
	㉖	6.0	6.5	5.5	4.0
IC304	⑦	4.9	3.5	4.9	4.9
	⑧	3.6	3.1	3.9	3.6
	⑨	3.6	3.1	3.9	3.6
	⑩	4.9	4.5	4.9	4.9
	⑲	3.0	3.8	3.0	3.0
	㉑	3.0	4.0	3.3	3.0
	㉒	5.8	5.8	7.4	3.0
	㉓	7.4	7.0	5.7	5.7
	㉕	0.1	0.1	0.1	6.0
	㉖	0.1	0.1	6.0	0.1
	㉗	0.1	6.0	0.1	0.1
	㉘	6.0	0.1	0.1	0.1

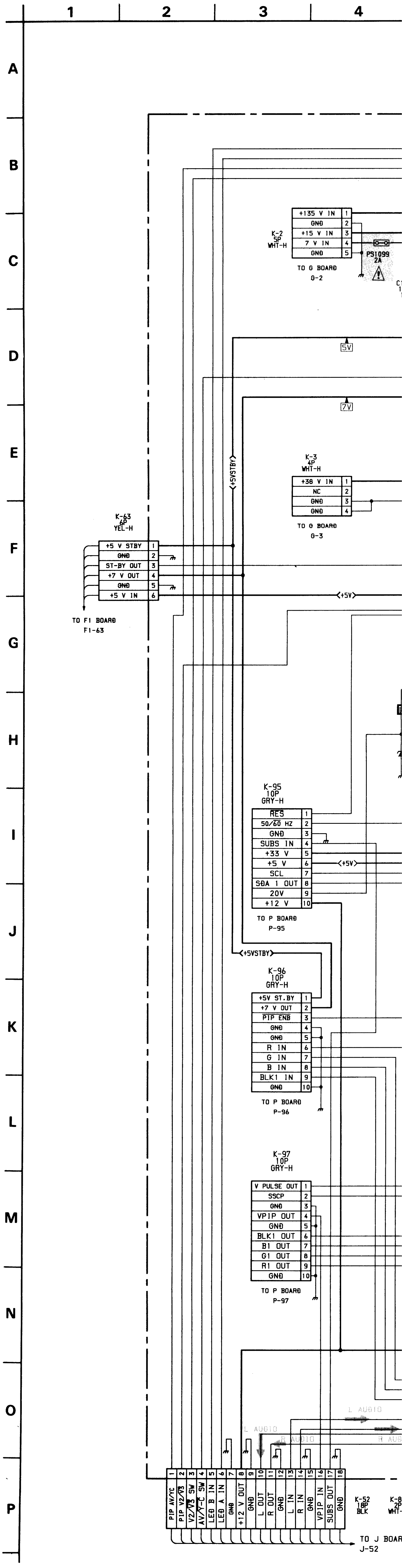
Q·NO		PAL	SECAM	NTSC 3.38	NTSC 4.43
Q338	B	2.9	4.1	4.0	4.0
	E	3.5	4.7	4.7	4.7
Q339	B	3.5	4.7	4.7	4.7
	E	2.9	4.1	4.0	4.0
Q341	B	0	0.7	0	0
	C	12.1	0	0	12.1
Q342	B	0	0	0.7	0
	C	12.1	0	0	12.1
Q343	B	3.4	5.4	5.3	5.3
	E	2.8	4.7	4.7	4.7
Q344	B	0.1	5.4	0.1	0.1
	E	4.4	4.7	4.4	4.4
Q345	B	5.1	0.1	5.1	5.1
	E	4.4	4.7	4.4	4.4
Q347	B	0.6	0	0	0
	C	0.1	12.1	12.2	12.2
Q348	B	0.1	0.1	6.0	0.1
	C	0.6	0.6	0	0.6

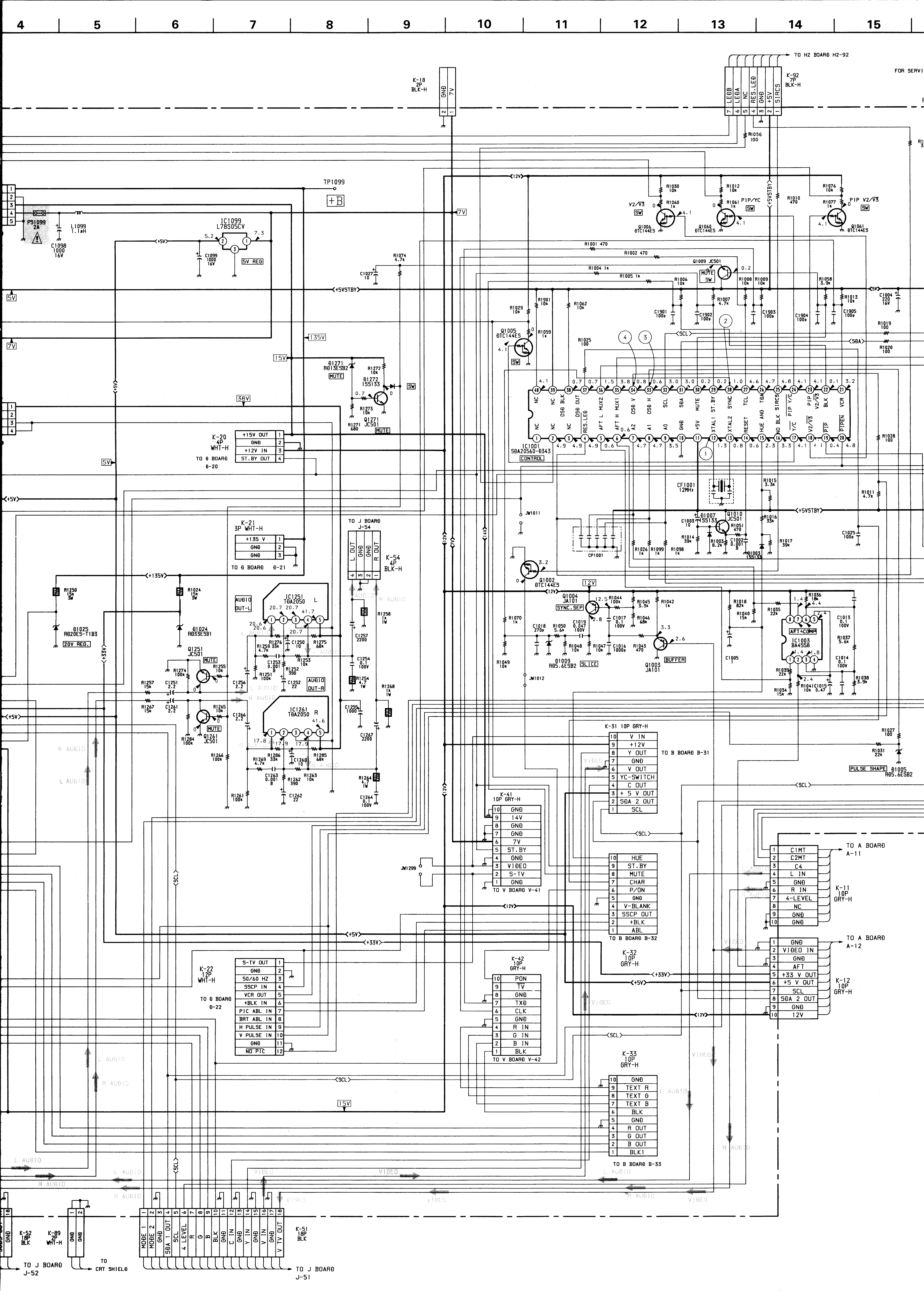
• WAVEFORMS K BOARD

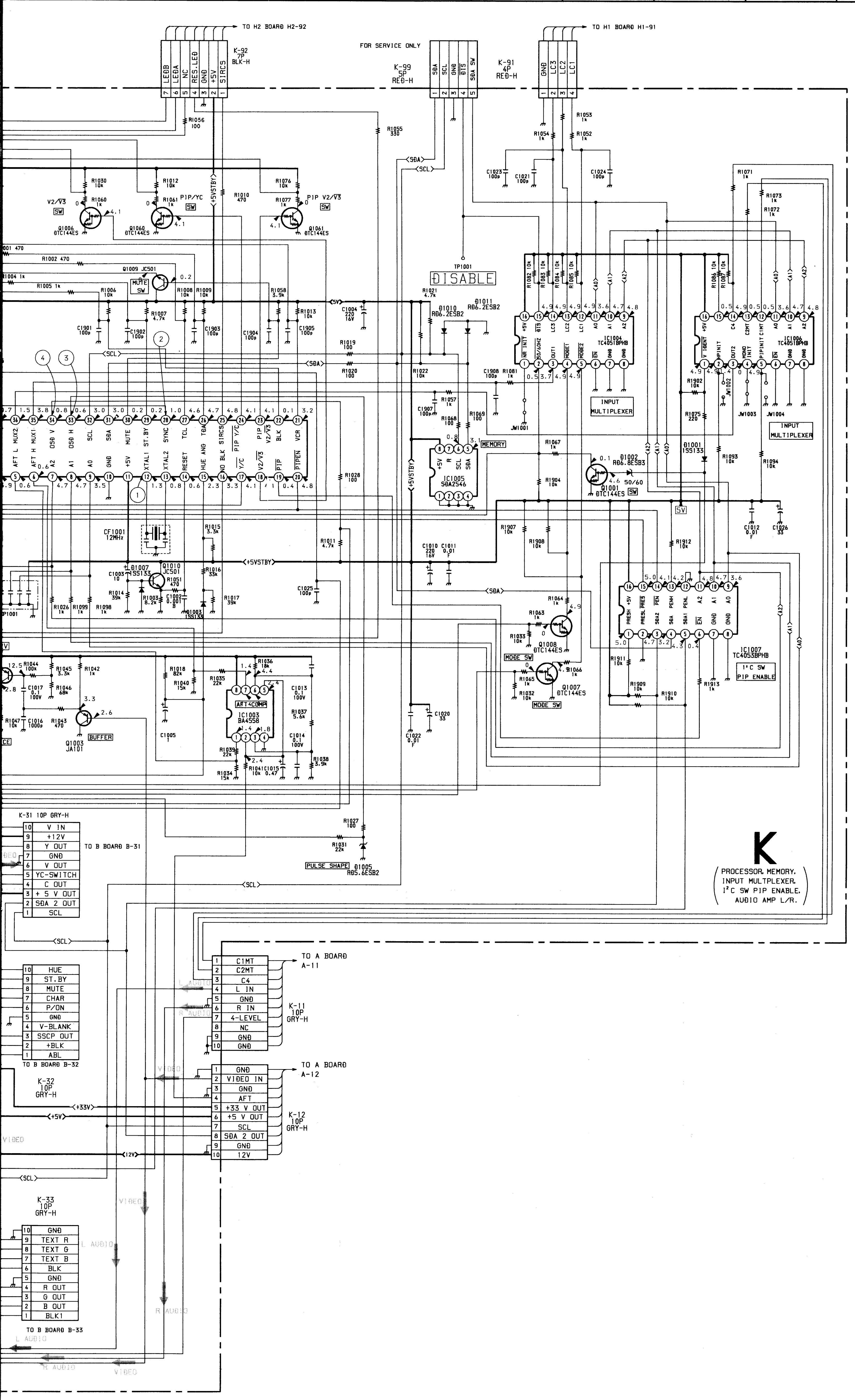


K BOARD IC1251/1261 TDA2050


UREF
SHORT
CIRF.
PROTECT.
SHORT
CIRF.
PROTECT.
⑤
④
③
①
②

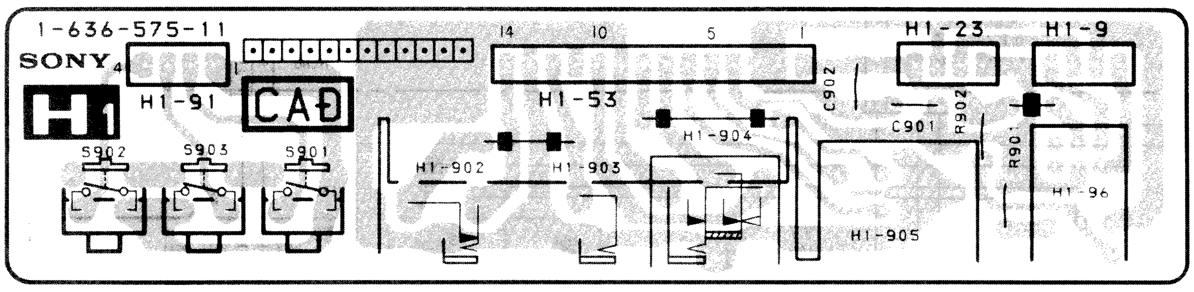

1
2
3
4
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
K-2
5P
WHT-H
+135 V IN 1
GND 2
+15 V IN 3
7 V IN 4
GND 5
TO G BOARD
G-2
PS1099
2A
5V
7V
<+5VSTBY>
K-3
4P
WHT-H
+38 V IN 1
NC 2
GND 3
GND 4
TO G BOARD
G-3
K-63
6P
YEL-H
+5 V STBY 1
GND 2
ST-BY OUT 3
+7 V OUT 4
GND 5
+5 V IN 6
TO F1 BOARD
F1-63
<+5V>
K-95
10P
GRY-H
RES 1
50/60 HZ 2
GND 3
SUBS IN 4
+33 V 5
+5 V 6
SCL 7
SDA 1 OUT 8
20V 9
+12 V 10
<+5V>
TO P BOARD
P-95
<+5VSTBY>
K-96
10P
GRY-H
+5V ST.BY 1
+7 V OUT 2
PIP ENB 3
GND 4
GND 5
R IN 6
G IN 7
B IN 8
BLK1 IN 9
GND 10
TO P BOARD
P-96
K-97
10P
GRY-H
V PULSE OUT 1
SSCP 2
GND 3
VPIP OUT 4
GND 5
BLK1 OUT 6
B1 OUT 7
G1 OUT 8
R1 OUT 9
GND 10
TO P BOARD
P-97
L AUDIO
L AUDIO
R AUDIO
R AUD
1 PIP AV/YC
2 PIP V2/V3
3 V2/V3 SW
4 AV/Y-C SW
5 LED B IN
6 LED A IN
7 GND
8 +12 V OUT
9 GND
10 L OUT
11 R OUT
12 GND
13 L IN
14 R IN
15 GND
16 VPIP IN
17 SUBS OUT
18 GND
K-52
18P
BLK
K-8
2P
WHT-
TO J BOAR
J-52


4
5
6
7
8
9
10
11
12
13
14
15
TO H2 BOARD H2-92
FOR SERVI
K-18 2P BLK-H
GND
7V
K-92 7P BLK-H
LEDB
LEDA
NC
RES.LED
GND
+5V
SIRCS
R1056 100
TP1099
+B
PS1099 2A
L1099 1.1µH
C1098 1000 16V
IC1099 L78S05CV
5V REG
C1099 1000 16V
7V
5V
12V
R1030 10k
R1060 1k
V2/V3
SW
Q1006 DTC144ES
R1012 10k
R1061 1k
PIP/YC
Q1060 DTC144ES
+5VSTBY
R1010 470
R1076 10k
R1077 1k
PIP V2/V3
Q1061 DTC144ES
R1001 470
R1002 470
R1004 1k
R1005 1k
Q1009 JC501
MUTE SW
R1006 10k
R1008 10k
R1009 10k
R1058 3.9k
R1013 10k
C1004 220 16V
R1074 4.7k
C1027 10
+5VSTBY
135V
15V
38V
R1029 10k
R1901 10k
R1062 10k
C1901 100p
C1902 100p
R1007 4.7k
C1903 100p
C1904 100p
C1905 100p
R1019 100
R1020 100
SDA
SCL
Q1005 DTC144ES
R1059 1k
R1025 100
D1271 RD13ESB2
MUTE
R1272 10k
D1272 1SS133
Q1271 JC501
R1273 10k
R1271 680
IC1001 SDA20560-D343
CONTROL
NC
OSD BLK
OSD OUT
AFT L MUX2
AFT H MUX1
OSD V
OSD H
SCL
SDA
MUTE
ST.BY
SYNC
TCL
TBD
HUE ANG
SIRCS
PIP Y/C
PIP V2/V3
BLK
VCR
RES.LED
A2
A1
A0
GND
+5V
XTAL1
XTAL2
RESET
NO BLK
Y/C
V2/V3
PIP
PIPEN
R1028 100
K-20 4P WHT-H
+15V OUT
GND
+12V IN
ST.BY OUT
TO D BOARD D-20
CF1001 12MHz
R1015 3.3k
R1011 4.7k
JW1011
D1007 1SS133
Q1010 JC501
R1051 470
C1003 10
R1016 33k
R1014 39k
R1003 8.2k
C1002 0.001
D1003 1SS133
R1017 39k
C1025 100p
CP1001
R1026 1k
R1099 1k
R1098 1k
K-21 3P WHT-H
+135 V
GND
GND
TO D BOARD D-21
TO J BOARD J-54
L OUT
GND
GND
R OUT
K-54 4P BLK-H
Q1002 DTC144ES
R1250 15k 5W
D1025 RD20ES-T1B3
20V REG.
R1024 15k 5W
D1024 RD33ESB1
AUDIO OUT-L
IC1251 TDA2050 L
R1258 1k 1W
C1257 2200
C1254 0.1 100V
R1254 4.7 1W
AUDIO OUT-R
R1268 1k 1W
C1255 1000
Q1251 JC501
R1274 100k
R1255 10k
R1257 15k
C1251 2.2
R1267 15k
C1261 2.2
R1259 33k 4.7k
R1276
C1250 10
R1275 68k
C1253 0.001 B
R1252 390
R1253 10k
R1251 100k
C1252 22
C1256 2.2
C1266 2.2
Q1261 JC501
R1265 10k
R1284 100k
R1266 100k
IC1261 TDA2050 R
R1269 33k 4.7k
R1286
C1260 10
R1285 68k
C1263 0.001 B
R1262 390
R1263 10k
C1262 22
R1261 100k
C1267 2200
R1264 4.7 1W
C1264 0.1 100V
Q1004 JA101
SYNC.SEP
R1044 100k
R1045 3.3k
R1042 1k
R1046 68k
C1017 0.1 100V
R1070 1k
C1018 270p
R1050 5.6k
C1019 0.047 100V
R1048 10k
R1047 1k
C1016 1000p
R1043 470
Q1003 JA101
BUFFER
R1049 10k
D1009 RD5.6ESB2
SLICE
JW1012
R1018 82k
R1040 15k
C1005 1
R1035 22k
R1036 18k
IC1003 BA4558
AFT4COMP
C1013 0.1 100V
R1037 5.6k
C1014 0.1 100V
R1039 22k
R1034 15k
R1041 10k
C1015 0.47
R1038 3.9k
R1027 100
R1031 22k
PULSE SHAPE
D1005 RD5.6ESB2
K-31 10P GRY-H
V IN
+12V
Y OUT
GND
V OUT
YC-SWITCH
C OUT
+5 V OUT
SDA 2 OUT
SCL
TO B BOARD B-31
K-41 10P GRY-H
GND
14V
GND
GND
7V
ST.BY
GND
VIDEO
S-TV
GND
TO V BOARD V-41
JW1299
HUE
ST.BY
MUTE
CHAR
P/ON
GND
V-BLANK
SSCP OUT
+BLK
ABL
TO B BOARD B-32
K-32 10P GRY-H
TO A BOARD A-11
C1MT
C2MT
C4
L IN
GND
R IN
4-LEVEL
NC
GND
GND
K-11 10P GRY-H
TO A BOARD A-12
GND
VIDEO IN
GND
AFT
+33 V OUT
+5 V OUT
SCL
SDA 2 OUT
GND
12V
K-12 10P GRY-H
K-22 12P WHT-H
TO D BOARD D-22
S-TV OUT
GND
50/60 HZ
SSCP IN
VCR OUT
+BLK IN
PIC ABL IN
BRT ABL IN
H PULSE IN
V PULSE IN
GND
NO PIC
K-42 10P GRY-H
PON
TV
GND
TXD
CLK
GND
R IN
G IN
B IN
BLK
TO V BOARD V-42
K-33 10P GRY-H
GND
TEXT R
TEXT G
TEXT B
BLK
GND
R OUT
G OUT
B OUT
BLK1
TO B BOARD B-33
L AUDIO
R AUDIO
VIDEO
K-52 18P BLK
K-89 2P WHT-H
TO CRT SHIELD
TO J BOARD J-52
MODE 1
MODE 2
GND
SDA 1 OUT
SCL
4 LEVEL
R
G
B
BLK
GND
C IN
GND
Y IN
GND
V IN
GND
V TV OUT
K-51 18P BLK
TO J BOARD J-51


TO H2 BOARD H2-92
K-92 7P BLK-H
LEDB
LEDA
NC
RES.LED
GND
+5V
SIRCS
FOR SERVICE ONLY
K-99 5P RED-H
SDA
SCL
GND
DIS
SDA SW
K-91 4P RED-H
TO H1 BOARD H1-91
GND
LC3
LC2
LC1
DISABLE
TP1001
IC1004 TC4051BPHB
INPUT MULTIPLEXER
IC1006 TC4051BPHB
INPUT MULTIPLEXER
IC1005 S0A2546
MEMORY
IC1007 TC4053BPHB
I²C SW PIP ENABLE
IC1003 BA4558
AFT4COMP
Q1003 JA101
BUFFER
Q1008 DTC144ES
Q1007 DTC144ES
MODE SW
Q1001 DTC144ES
Q1002 RD6.8ESB3
50/60
Q1006 DTC144ES
Q1060 DTC144ES
Q1061 DTC144ES
V2/V3
PIP/YC
PIP V2/V3
SW
Q1009 JC501
MUTE SW
Q1010 JC501
CF1001 12MHz
D1010 RD6.2ESB2
D1011 RD6.2ESB2
D1005 RD5.6ESB2
PULSE SHAPE
+5VSTBY
5V
MUX2 MUX1 OSD V OSD H SCL SDA MUTE ST.BY SYNC TCL TDA SIRCS PIP Y/C PIP V2/V3 BLK VCR
AFT L AFT H A2 A1 A0 GND +5V XTAL1 XTAL2 RESET HUE ANG TDA NO BLK Y/C PIP PIPEN
K-31 10P GRY-H
TO B BOARD B-31
10 V IN
9 +12V
8 Y OUT
7 GND
6 V OUT
5 YC-SWITCH
4 C OUT
3 + 5 V OUT
2 SDA 2 OUT
1 SCL
10 HUE
9 ST.BY
8 MUTE
7 CHAR
6 P/ON
5 GND
4 V-BLANK
3 SSCP OUT
2 +BLK
1 ABL
TO B BOARD B-32
K-32 10P GRY-H
TO A BOARD A-11
1 C1MT
2 C2MT
3 C4
4 L IN
5 GND
6 R IN
7 4-LEVEL
8 NC
9 GND
10 GND
K-11 10P GRY-H
TO A BOARD A-12
1 GND
2 VIDEO IN
3 GND
4 AFT
5 +33 V OUT
6 +5 V OUT
7 SCL
8 SDA 2 OUT
9 GND
10 12V
K-12 10P GRY-H
K-33 10P GRY-H
10 GND
9 TEXT R
8 TEXT G
7 TEXT B
6 BLK
5 GND
4 R OUT
3 G OUT
2 B OUT
1 BLK1
TO B BOARD B-33
L AUDIO
R AUDIO
VIDEO
K
PROCESSOR, MEMORY, INPUT MULTPLEXER, I²C SW PIP ENABLE, AUDIO AMP L/R.

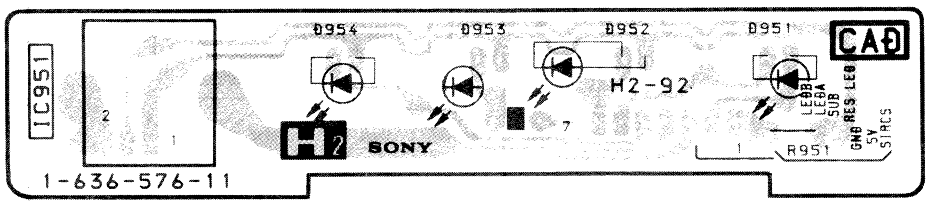
H1 [CONTROL SW, AUDIO/VIDEO IN] **H2** [SIRCS RECEIVER, INDICATOR] **K** [PROCESSOR, MEMORY, INPUT MULTPLEXER, I²C SW, PIP ENABLE, AUDIO AMP L/R] **A** [TUNER, SIF, VIF]

–H1 Board–



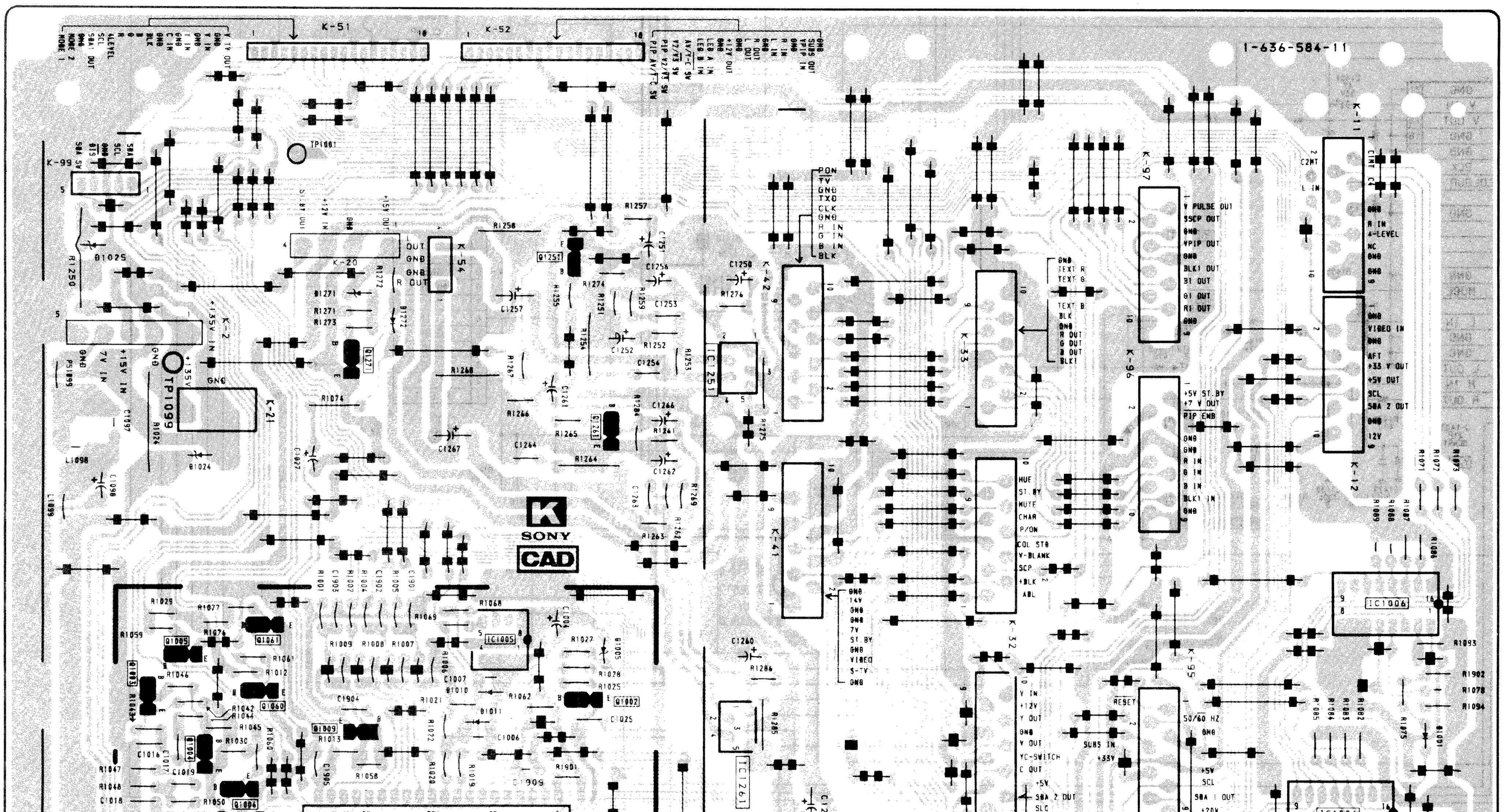
1-636-575-11
SONY
H1
CAD
H1-91
H1-53
H1-23
H1-9
C902
C901
R902
R901
S902
S903
S901
H1-902
H1-903
H1-904
H1-96
H1-905

–H2 Board–

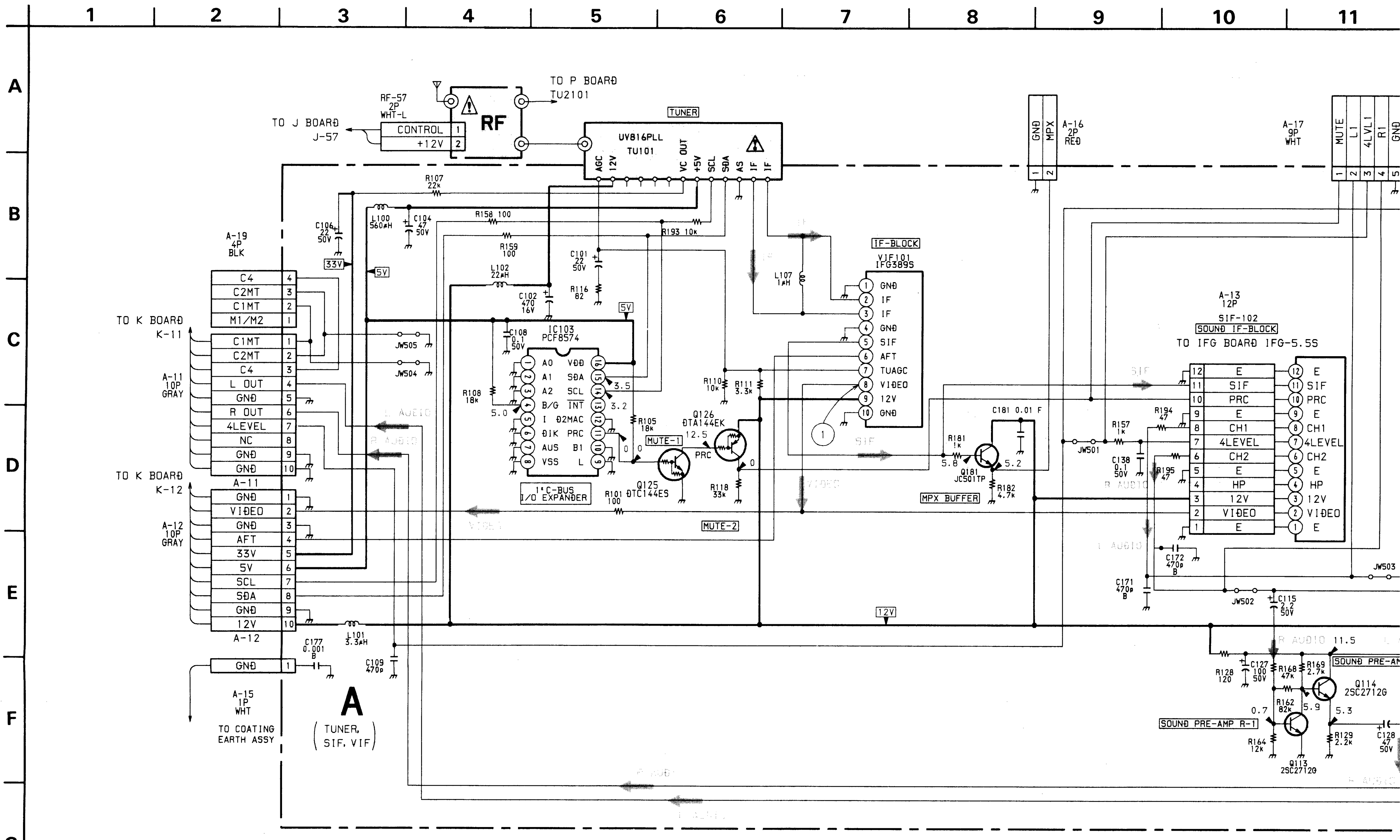


IC951
D954
D953
D952
D951
CAD
H2-92
H2
SONY
R951
1-636-576-11

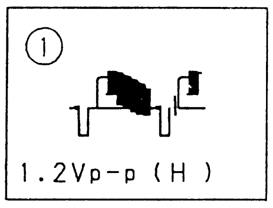
–K Board–



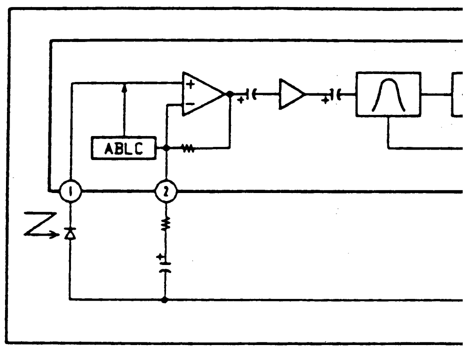
K-51
K-52
1-636-584-11
K-99
K-20
K-54
K-2
K-21
K-42
K-53
K-97
K-96
K-11
K-12
K-41
K-32
K-95
K-31
K-3
K-18
K-92
K-63
K-89
K-22
K-91
TP1081
TP1099
IC251
IC1261
IC1005
IC1001
IC1003
IC1099
IC1021
IC1006
IC1004
IC1007
Q1008
Q1007
Q1001
Q1010
K
SONY
CAD


TO P BOARD
TU2101
RF-57
2P
WHT-L
CONTROL
+12V
RF
TO J BOARD
J-57
TUNER
UV816PLL
TU101
AGC
12V
VC OUT
+5V
SCL
SDA
AS
IF
IF
R107
22k
L100
560μH
C104
47
50V
C106
22
50V
R158 100
R193 10k
R159
100
L102
22μH
C101
22
50V
R116
82
C102
470
16V
5V
33V
A-19
4P
BLK
C4
C2MT
C1MT
M1/M2
TO K BOARD
K-11
A-11
10P
GRAY
L OUT
GND
R OUT
4LEVEL
NC
TO K BOARD
K-12
A-12
10P
GRAY
VIDEO
AFT
SCL
SDA
12V
C108
0.1
50V
IC103
PCF8574
A0
A1
A2
B/G
I
ØIK
AUS
VSS
VDD
SDA
SCL
INT
Ø2MAC
PRC
B1
L
R108
18k
5.0
3.5
3.2
R105
18k
MUTE-1
Q125
DTC144ES
R101
100
Q126
DTA144EK
12.5
PRC
R118
33k
R110
10k
R111
3.3k
MUTE-2
I²C-BUS
I/O EXPANDER
JW505
JW504
L AUDIO
R AUDIO
VIDEO
IF-BLOCK
VIF101
IFG389S
L107
1μH
SIF
AFT
TUAGC
12V
①
R181
1k
5.8
Q181
JC501TP
5.2
R182
4.7k
C181 0.01 F
MPX BUFFER
GND
MPX
A-16
2P
RED
A-17
9P
WHT
MUTE
L1
4LVL1
R1
GND
A-13
12P
SIF-102
SOUND IF-BLOCK
TO IFG BOARD IFG-5.5S
E
PRC
CH1
CH2
HP
R157
1k
R194
47
R195
47
JW501
C138
0.1
50V
C172
470p
B
C171
470p
B
JW502
C115
2.2
50V
JW503
12V
L101
3.3μH
C177
0.001
B
C109
470p
A-15
1P
WHT
TO COATING
EARTH ASSY
A
TUNER,
SIF, VIF
R AUDIO 11.5
R128
120
C127
100
50V
R168
47k
R169
2.7k
SOUND PRE-AMP
Q114
2SC2712G
R162
82k
0.7
5.9
5.3
SOUND PRE-AMP R-1
R164
12k
R129
2.2k
C128
47
50V
Q113
2SC2712G
R AUD
L AUDIO
1 2 3 4 5 6 7 8 9 10 11
A B C D E F G H I

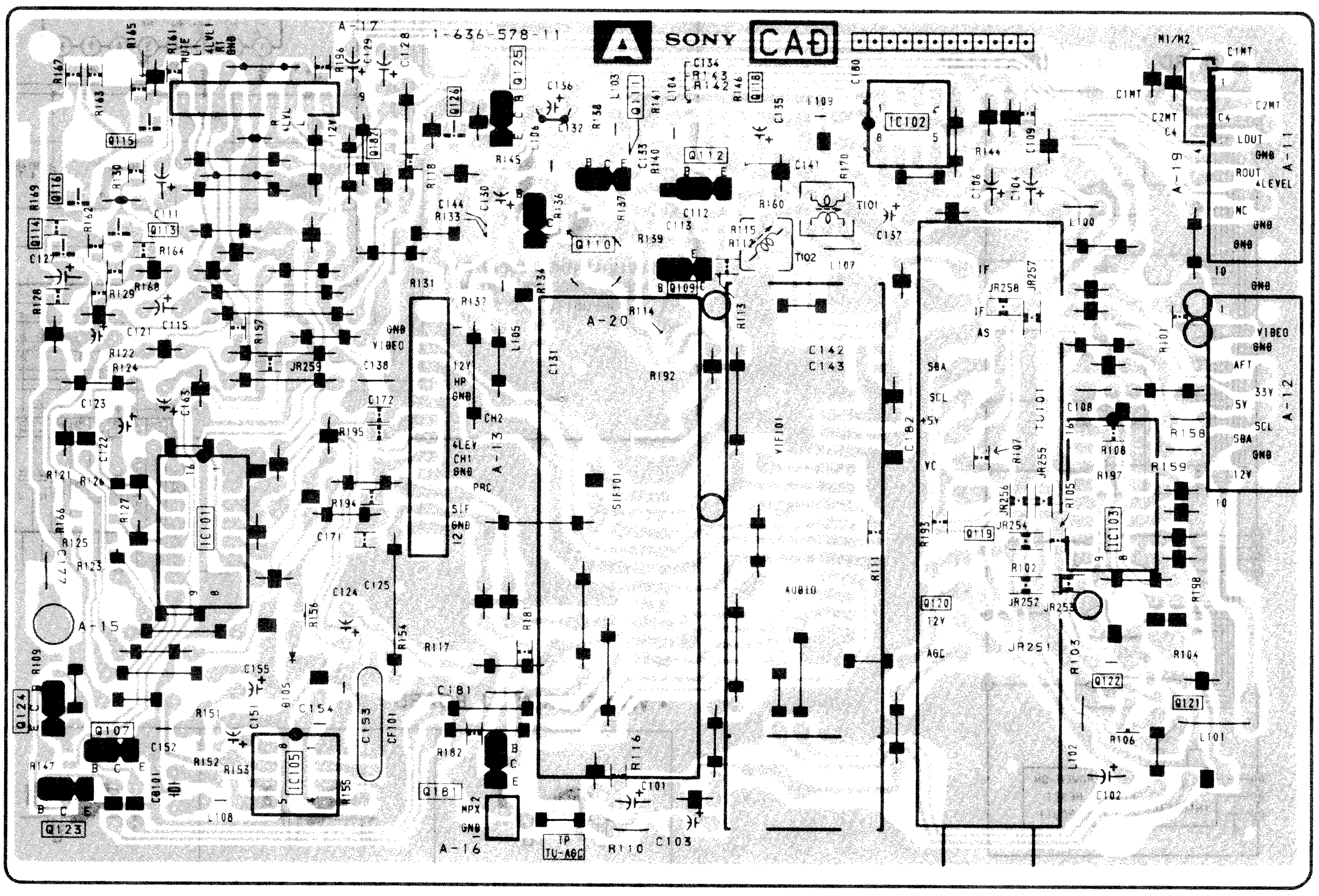
• WAVEFORMS A BOARD



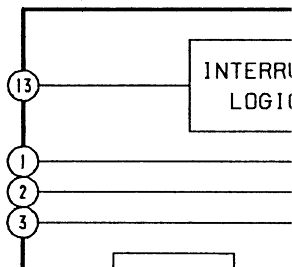
H2 BOARD IC951 BA1387

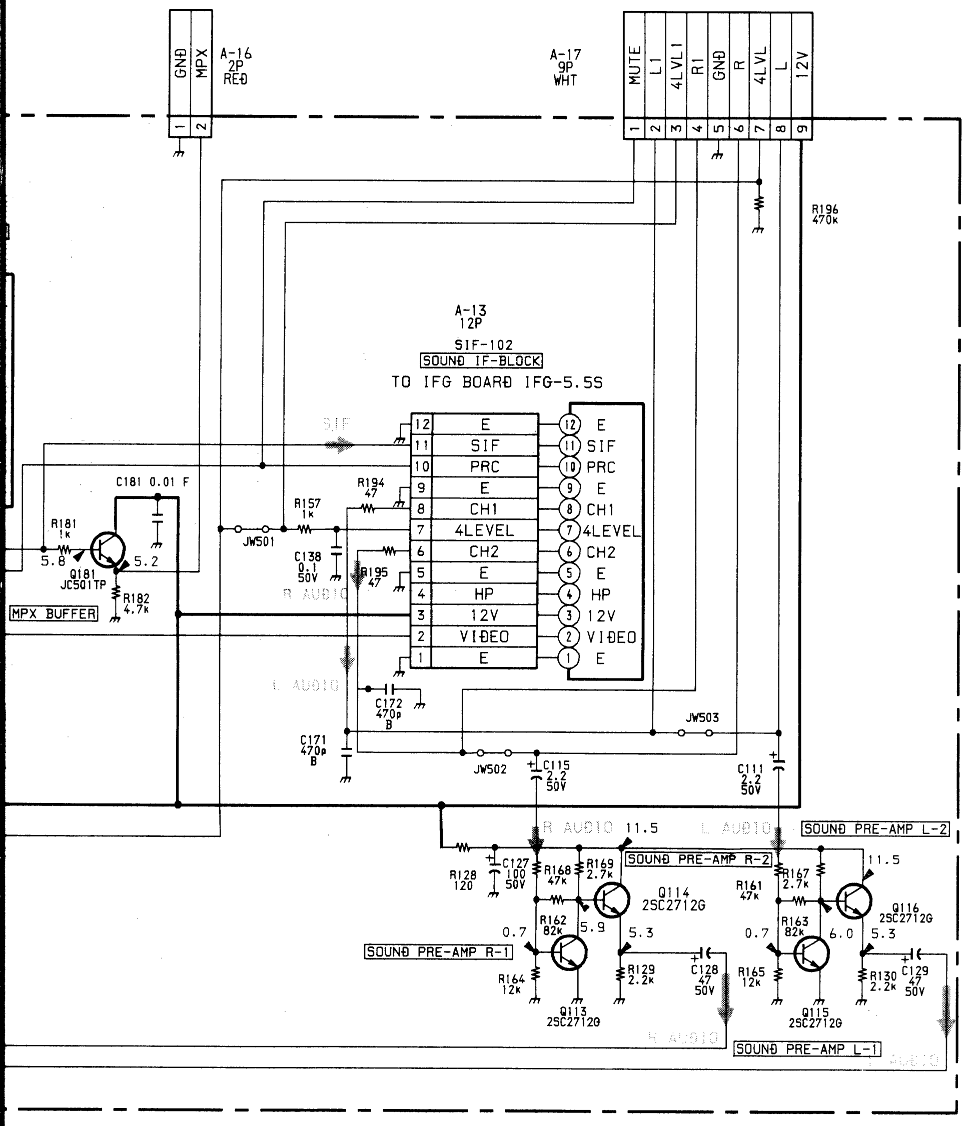


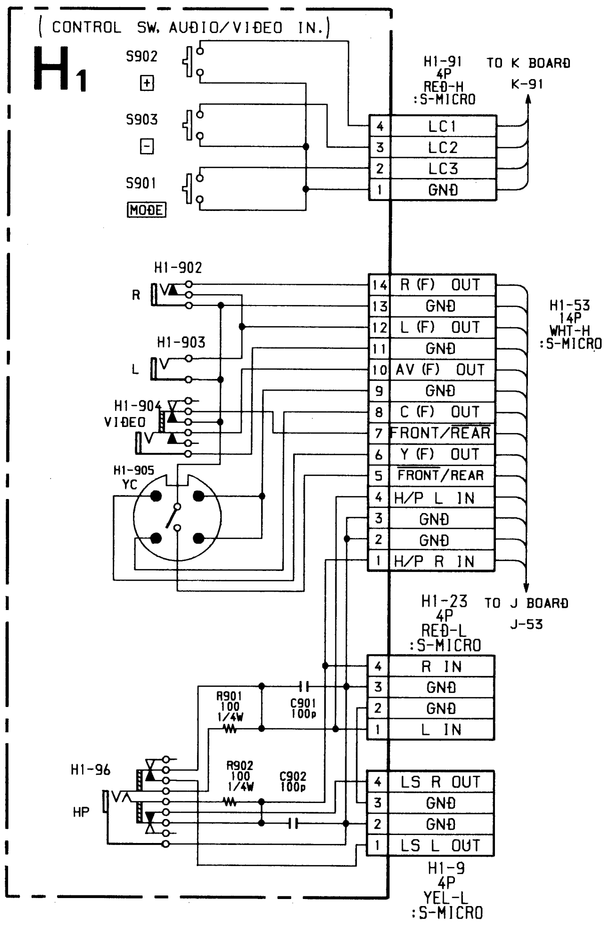
—A Board—


1-636-578-11
A
SONY
CAD
A-17
A-19
A-11
A-12
A-13
A-15
A-16
A-20
IC101
IC102
IC103
IC105
TU101
VIF101
SIF101
M1/M2
C1MT
C2MT
C4
LOUT
ROUT
4LEVEL
NC
GND
VIDEO
AFT
33V
5V
SCL
SDA
12V
MPX
TU-AGC

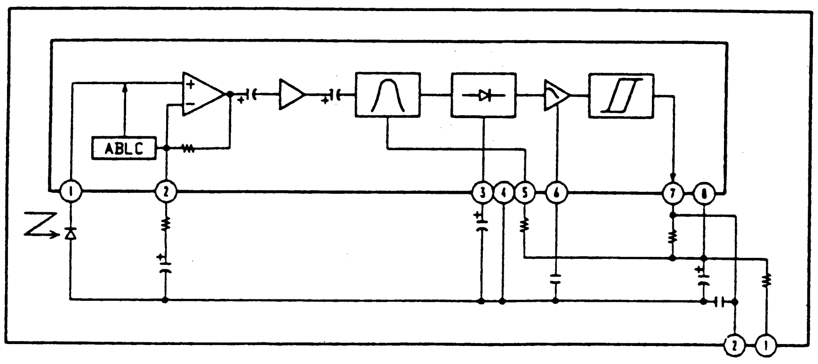
A BOARD IC103 PCF

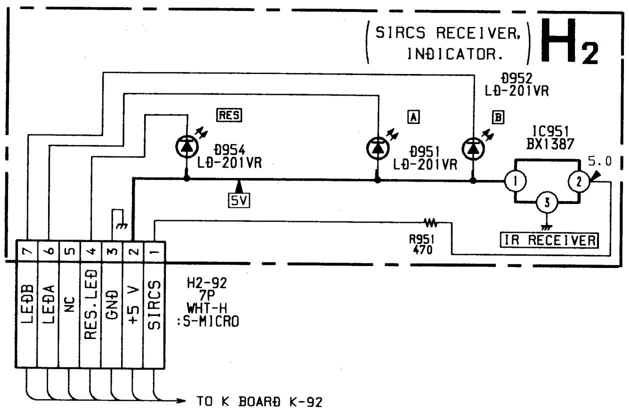

INTERRU
LOGIC
INPUT
FILTER
POWER-ON
RESET
13
1
2
3
14
15
16
8

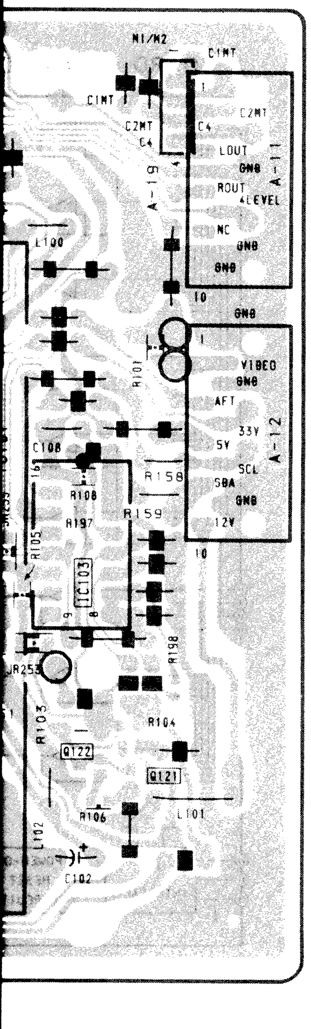

GND MPX
A-16 2P RED
MUTE L1 4LVL1 R1 GND R 4LVL L 12V
A-17 9P WHT
R196 470k
A-13 12P
SIF-102
SOUND IF-BLOCK
TO IFG BOARD IFG-5.5S
E
SIF
PRC
E
CH1
4LEVEL
CH2
E
HP
12V
VIDEO
E
C181 0.01 F
R181 1k
Q181 JC501TP
5.8
5.2
R182 4.7k
MPX BUFFER
R157 1k
JW501
C138 0.1 50V
R194 47
R195 47
R AUDIO
L AUDIO
C172 470p B
C171 470p B
JW502
C115 2.2 50V
JW503
C111 2.2 50V
R AUDIO 11.5
L AUDIO
SOUND PRE-AMP L-2
SOUND PRE-AMP R-2
R128 120
C127 100 50V
R168 47k
R169 2.7k
Q114 2SC2712G
R161 47k
R167 2.7k
Q116 2SC2712G
11.5
0.7
R162 82k
5.9
5.3
R163 82k
6.0
5.3
SOUND PRE-AMP R-1
R164 12k
Q113 2SC2712G
R129 2.2k
C128 47 50V
R165 12k
Q115 2SC2712G
R130 2.2k
C129 47 50V
SOUND PRE-AMP L-1


CONTROL SW, AUDIO/VIDEO IN.
H1
S902
+
S903
−
S901
MODE
H1-91 4P RED-H :S-MICRO
TO K BOARD K-91
LC1
LC2
LC3
GND
H1-902
R
H1-903
L
H1-904
VIDEO
H1-905
YC
R (F) OUT
GND
L (F) OUT
GND
AV (F) OUT
GND
C (F) OUT
FRONT/REAR
Y (F) OUT
FRONT/REAR
H/P L IN
GND
GND
H/P R IN
H1-53 14P WHT-H :S-MICRO
H1-23 4P RED-L :S-MICRO
TO J BOARD J-53
R IN
GND
GND
L IN
R901 100 1/4W
C901 100p
H1-96
HP
R902 100 1/4W
C902 100p
LS R OUT
GND
GND
LS L OUT
H1-9 4P YEL-L :S-MICRO

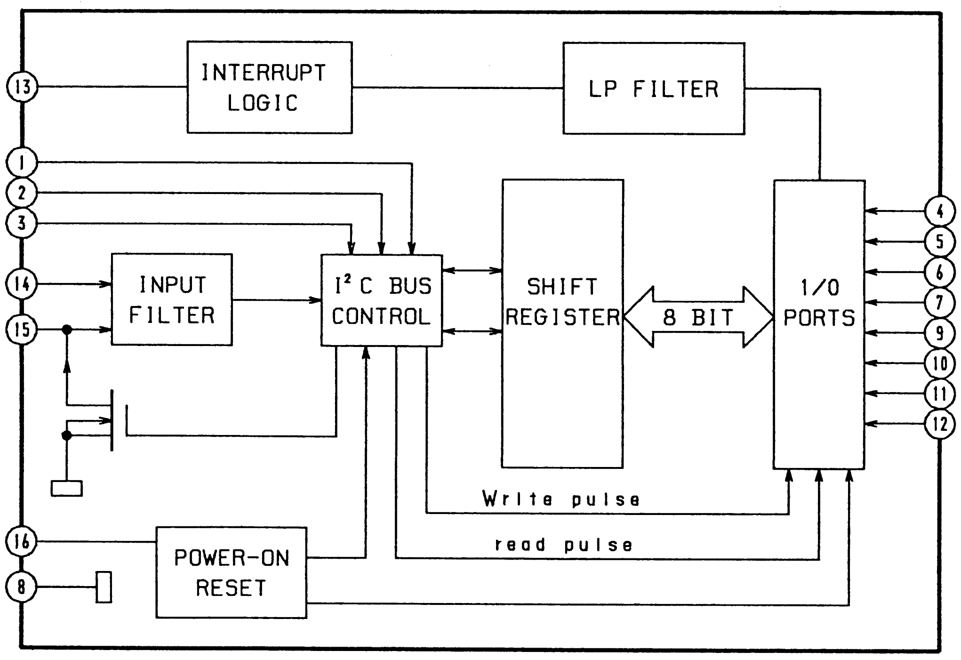
H2 BOARD IC951 BA1387


ABLC
1
2
3
4
5
6
7
8
2
1


SIRCS RECEIVER, INDICATOR.
H2
D952 LD-201VR
RES
A
B
D954 LD-201VR
D951 LD-201VR
IC951 BX1387
5.0
5V
R951 470
IR RECEIVER
LEDB LEDA NC RES.LED GND +5 V SIRCS
7 6 5 4 3 2 1
H2-92 7P WHT-H :S-MICRO
TO K BOARD K-92

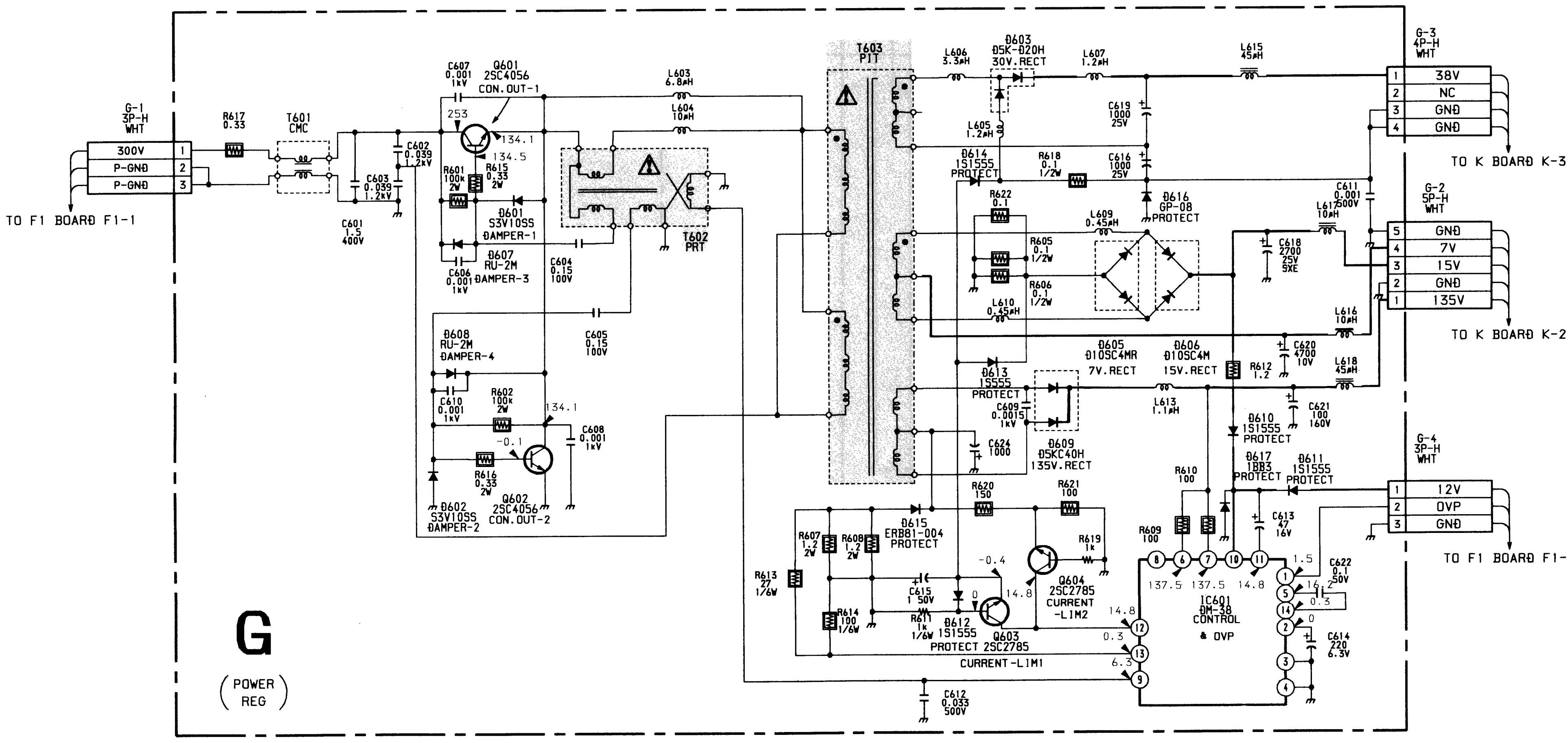

M1/M2
C1MT
C2MT
C4
LOUT
GND
ROUT
4LEVEL
NC
GND
A-19
A-11
L100
10
GND
VIDEO
GND
AFT
33V
5V
SCL
SDA
GND
12V
A-12
R101
C108
R158
R108
R197
R159
R105
IC103
R198
R253
R104
R103
Q122
Q121
R106
L101
L102
C102

A BOARD IC103 PCF8574

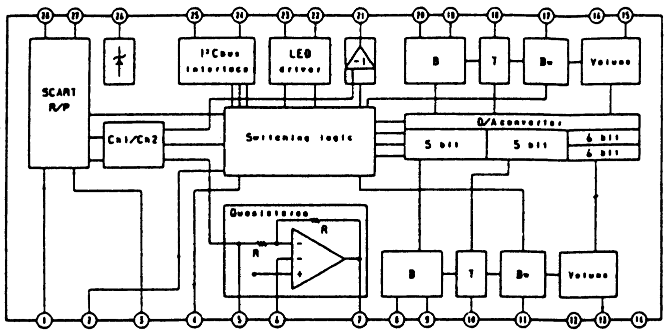

INTERRUPT LOGIC
LP FILTER
INPUT FILTER
I²C BUS CONTROL
SHIFT REGISTER
8 BIT
I/O PORTS
POWER-ON RESET
Write pulse
read pulse
13
1
2
3
14
15
16
8
4
5
6
7
9
10
11
12

1 2 3 4 5 6 7 8 9 10 11

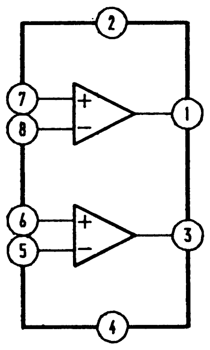
A B C D E F G H I J K L M N


G-1
3P-H
WHT
300V
P-GND
P-GND
TO F1 BOARD F1-1
R617 0.33
T601 CMC
C601 1.5 400V
C603 0.039 1.2kV
C602 0.039 1.2kV
C607 0.001 1kV
Q601 2SC4056 CON.OUT-1
253
134.1
134.5
R601 100k 2W
R615 0.33 2W
D601 S3V10SS DAMPER-1
D607 RU-2M DAMPER-3
C606 0.001 1kV
C604 0.15 100V
L603 6.8μH
L604 10μH
T602 PRT
C605 0.15 100V
D608 RU-2M DAMPER-4
C610 0.001 1kV
R602 100k 2W
134.1
C608 0.001 1kV
-0.1
R616 0.33 2W
D602 S3V10SS DAMPER-2
Q602 2SC4056 CON.OUT-2
T603 PIT
L606 3.3μH
D603 D5K-D20H 30V.RECT
L607 1.2μH
L615 45μH
L605 1.2μH
C619 1000 25V
D614 1S1555 PROTECT
R618 0.1 1/2W
C616 1000 25V
R622 0.1
D616 GP-08 PROTECT
L609 0.45μH
R605 0.1 1/2W
R606 0.1 1/2W
L610 0.45μH
C618 2700 25V 5XE
C611 0.001 500V
L617 10μH
L616 10μH
C620 4700 10V
D605 D10SC4MR 7V.RECT
D606 D10SC4M 15V.RECT
R612 1.2
L618 45μH
D613 1S555 PROTECT
C609 0.0015 1kV
L613 1.1μH
D610 1S1555 PROTECT
C621 100 160V
C624 1000
D609 D5KC40H 135V.RECT
R610 100
D617 1BB3 PROTECT
D611 1S1555 PROTECT
R620 150
R621 100
D615 ERB81-004 PROTECT
R619 1k
R609 100
C613 47 16V
R607 1.2 2W
R608 1.2 2W
R613 27 1/6W
-0.4
C615 1 50V
Q604 2SC2785 CURRENT -LIM2
14.8
R614 100 1/6W
R611 1k 1/6W
D612 1S1555 PROTECT
Q603 2SC2785 CURRENT-LIM1
0.3
6.3
14.8
137.5
137.5
14.8
IC601 DM-38 CONTROL & OVP
1.5
16.2
0.3
0
C622 0.1 50V
C614 220 6.3V
C612 0.033 500V
G-3 4P-H WHT
38V
NC
GND
GND
TO K BOARD K-3
G-2 5P-H WHT
GND
7V
15V
GND
135V
TO K BOARD K-2
G-4 3P-H WHT
12V
OVP
GND
TO F1 BOARD F1-4
G
POWER REG

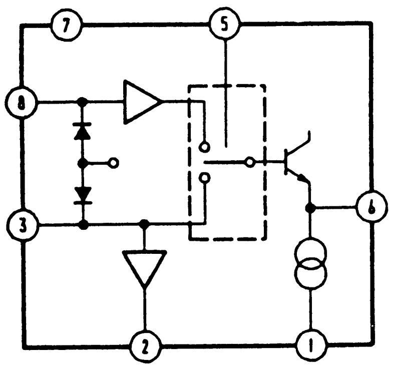
J BOARD IC201 TDA6200


SCART R/P
I²C bus interface
LED driver
B
T
B+
Volume
Cn1/Cn2
Switching logic
D/A converter
5 bit
5 bit
6 bit
6 bit
Quasi stereo
R
R
B
T
B+
Volume

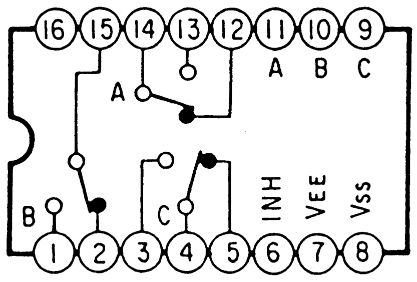
J BOARD IC204 TDA2822M



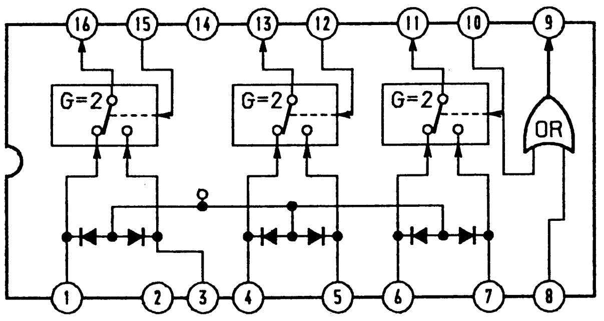
J BOARD IC1402 TEA2014A



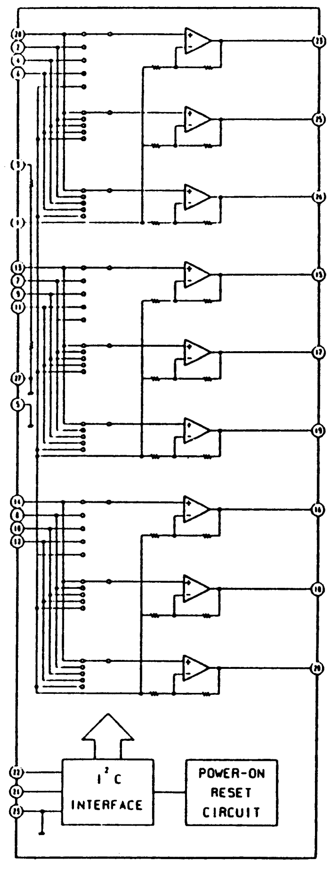
J BOARD IC1403 HD14053BP

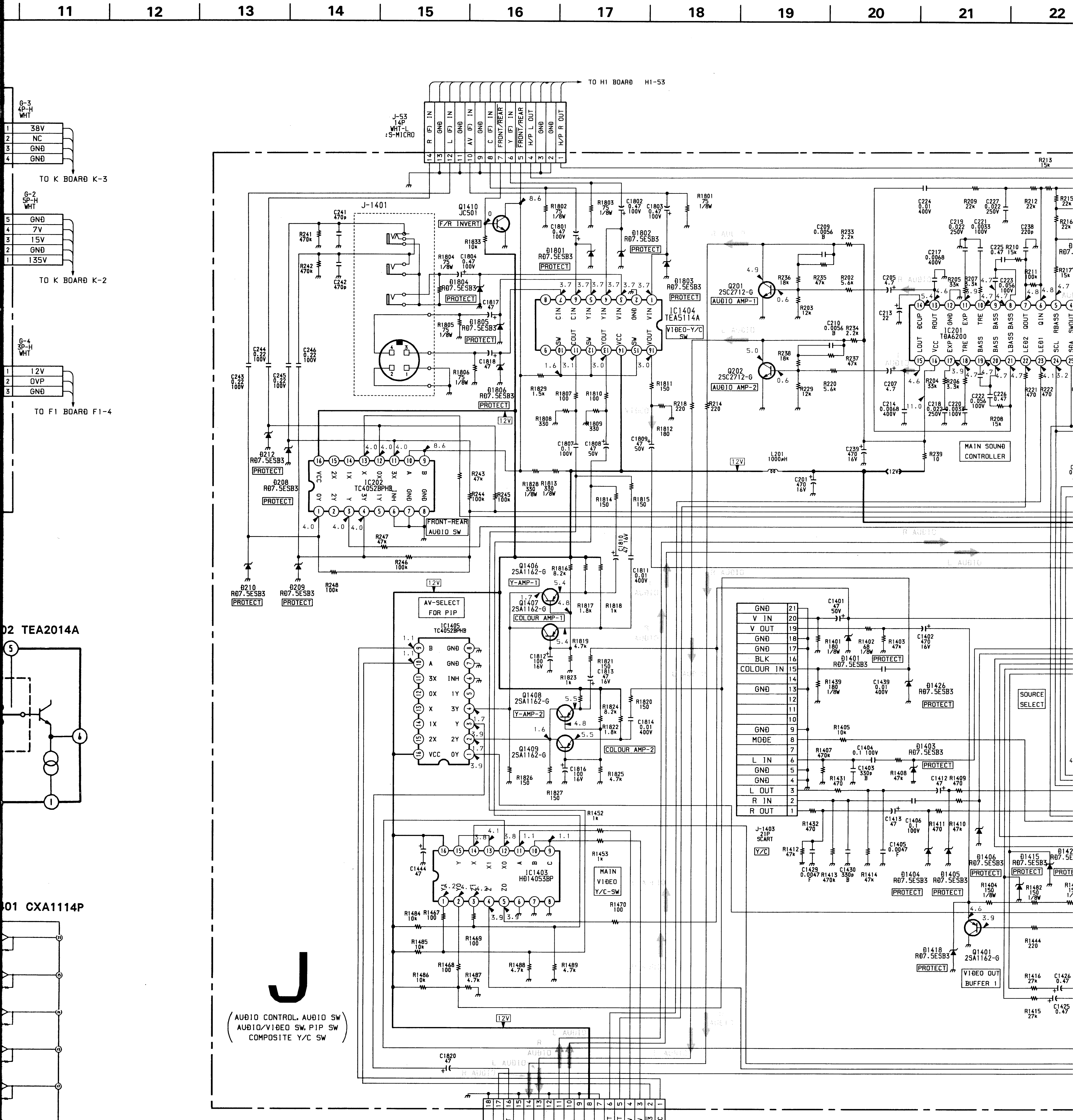

16
15
14
13
12
11
10
9
A
A B C
B
C
INH
VEE
Vss
1
2
3
4
5
6
7
8

J BOARD IC1404 TEA5114A

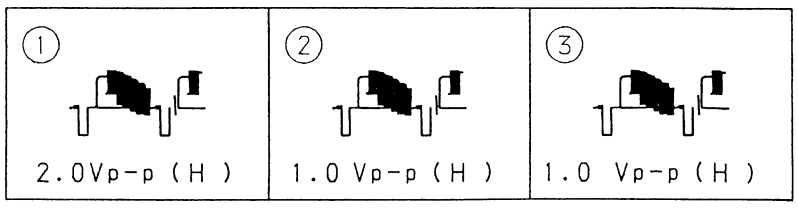

16
15
14
13
12
11
10
9
G=2
G=2
G=2
OR
1
2
3
4
5
6
7
8

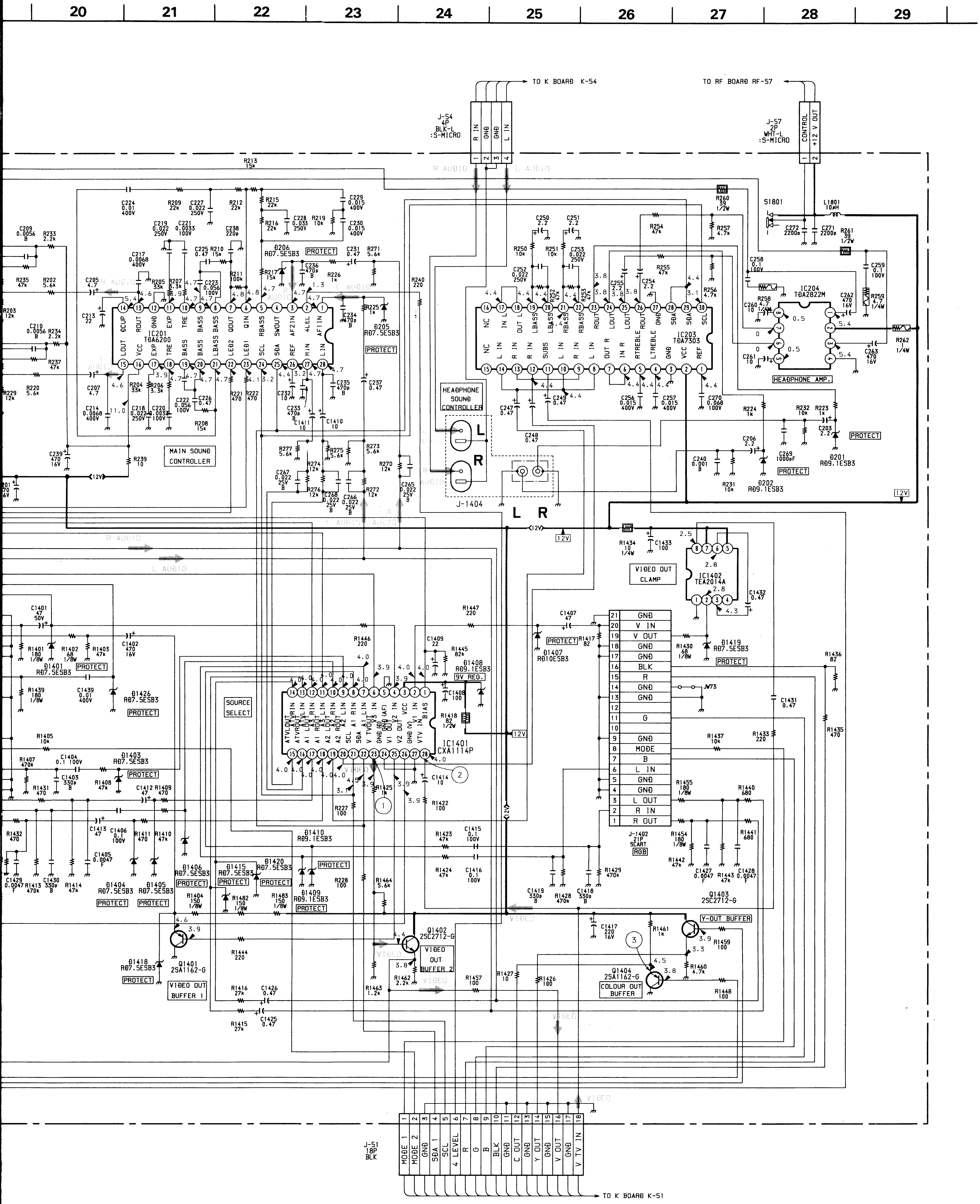
J BOARD IC1401 CXA1114P


I²C INTERFACE
POWER-ON RESET CIRCUIT


11
12
13
14
15
16
17
18
19
20
21
22
TO H1 BOARD H1-53
J-53 14P WHT-L :S-MICRO
R (F) IN
GND
L (F) IN
GND
AV (F) IN
GND
C (F) IN
FRONT/REAR
Y (F) IN
FRONT/REAR
H/P L OUT
GND
GND
H/P R OUT
G-3 4P-H WHT
38V
NC
GND
GND
TO K BOARD K-3
G-2 5P-H WHT
GND
7V
15V
GND
135V
TO K BOARD K-2
G-4 3P-H WHT
12V
OVP
GND
TO F1 BOARD F1-4
02 TEA2014A
01 CXA1114P
POWER-ON RESET CIRCUIT
J-1401
Q1410 JC501
F/R INVERT
PROTECT
IC1404 TEA5114A
VIDEO-Y/C SW
Q201 2SC2712-G
AUDIO AMP-1
Q202 2SC2712-G
AUDIO AMP-2
IC201 TDA6200
MAIN SOUND CONTROLLER
IC202 TC4052BPHB
FRONT-REAR AUDIO SW
IC1405 TC4052BPHB
AV-SELECT FOR PIP
Q1406 2SA1162-G
Y-AMP-1
Q1407 2SA1162-G
COLOUR AMP-1
Q1408 2SA1162-G
Y-AMP-2
Q1409 2SA1162-G
COLOUR AMP-2
IC1403 HD14053BP
MAIN VIDEO Y/C-SW
L201 1000μH
12V
J-1403 21P SCART
Y/C
GND
V IN
V OUT
GND
GND
BLK
COLOUR IN
GND
GND
MODE
L IN
GND
GND
L OUT
R IN
R OUT
SOURCE SELECT
Q1401 2SA1162-G
VIDEO OUT BUFFER 1
J
AUDIO CONTROL, AUDIO SW
AUDIO/VIDEO SW, PIP SW
COMPOSITE Y/C SW
J-52 18P BLK :HINGE-S
GND
SUBS IN
VPIP OUT
GND
R OUT
L OUT
GND
R IN
L IN
+12V IN
GND
LED A OUT
LED B OUT
AV/YC SW
V2/V3 SW
PIP V2/V3
PIP AV/YC
TO K BOARD K-52
R AUDIO
L AUDIO
VIDEO

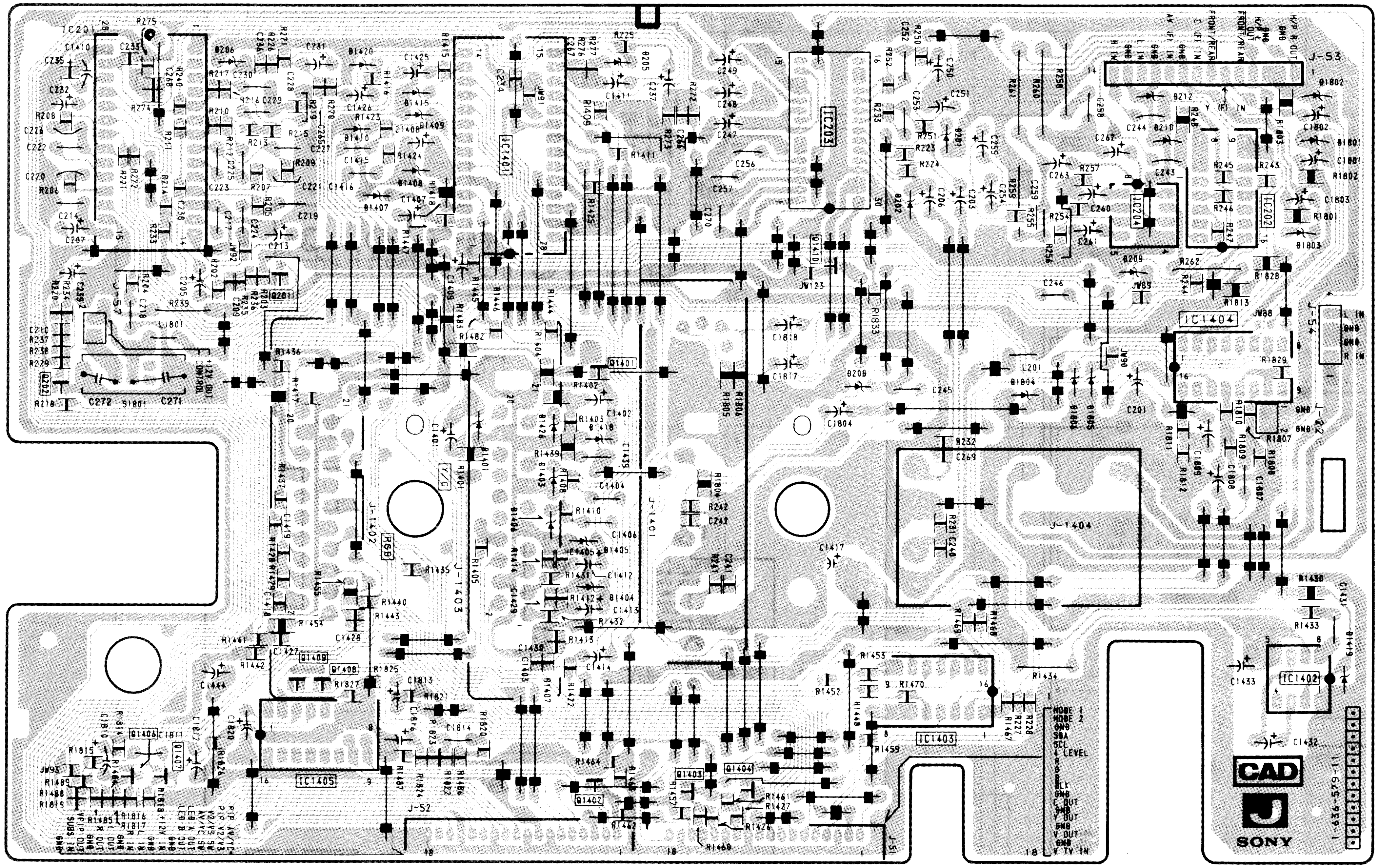
• WAVEFORMS J BOARD


①
2.0Vp-p (H)
②
1.0 Vp-p (H)
③
1.0 Vp-p (H)

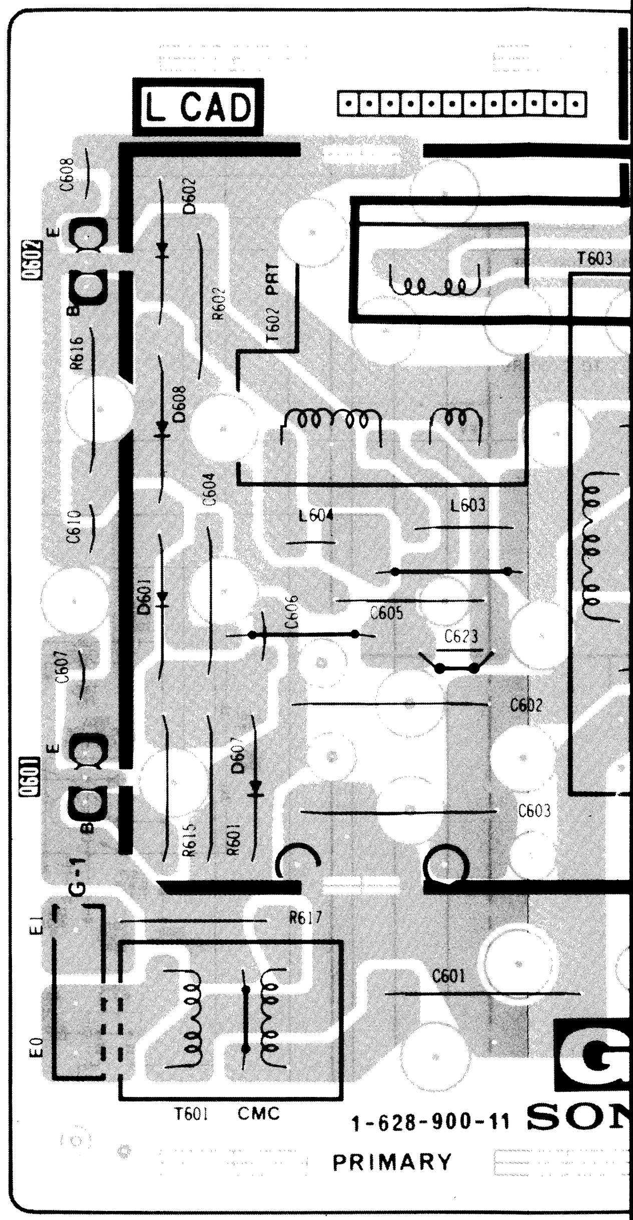

20
21
22
23
24
25
26
27
28
29
TO K BOARD K-54
TO RF BOARD RF-57
J-54 4P BLK-L :S-MICRO
R IN
GND
GND
L IN
J-57 2P WHT-L :S-MICRO
CONTROL
+12 V OUT
R AUDIO
L AUDIO
S1801
L1801 10μH
IC201 TDA6200
MAIN SOUND CONTROLLER
IC203 TDA7303
HEADPHONE SOUND CONTROLLER
IC204 TDA2822M
HEADPHONE AMP.
PROTECT
J-1404
L
R
12V
VIDEO OUT CLAMP
IC1402 TEA2014A
IC1401 CXA1114P
SOURCE SELECT
5V REG.
J-1402 21P SCART RGB
GND
V IN
V OUT
BLK
G
MODE
B
L IN
L OUT
R IN
R OUT
Q1401 2SA1162-G
VIDEO OUT BUFFER 1
Q1402 2SC2712-G
VIDEO OUT BUFFER 2
Q1403 2SC2712-G
Y-OUT BUFFER
Q1404 2SA1162-G
COLOUR OUT BUFFER
VIDEO
J-51 18P BLK
MODE 1
MODE 2
GND
SDA 1
SCL
4 LEVEL
R
G
B
BLK
GND
C OUT
GND
Y OUT
GND
V OUT
GND
V TV IN
TO K BOARD K-51

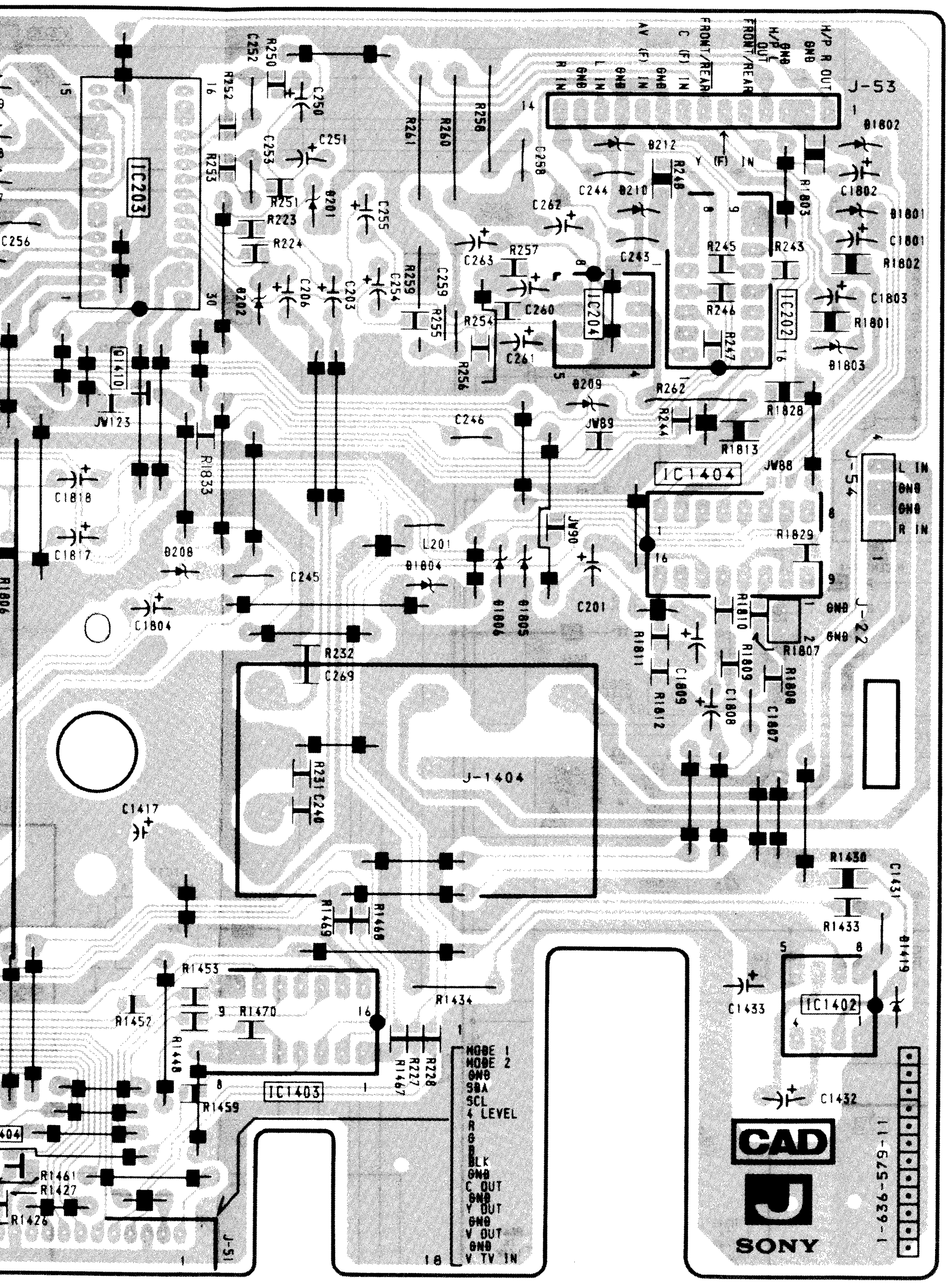
J [AUDIO CONTROL, AUDIO SW, AUDIO/VIDEO SW, PIN SW, COMPOSITE Y/C SW] **G** [POWER, REG]

-J Board-

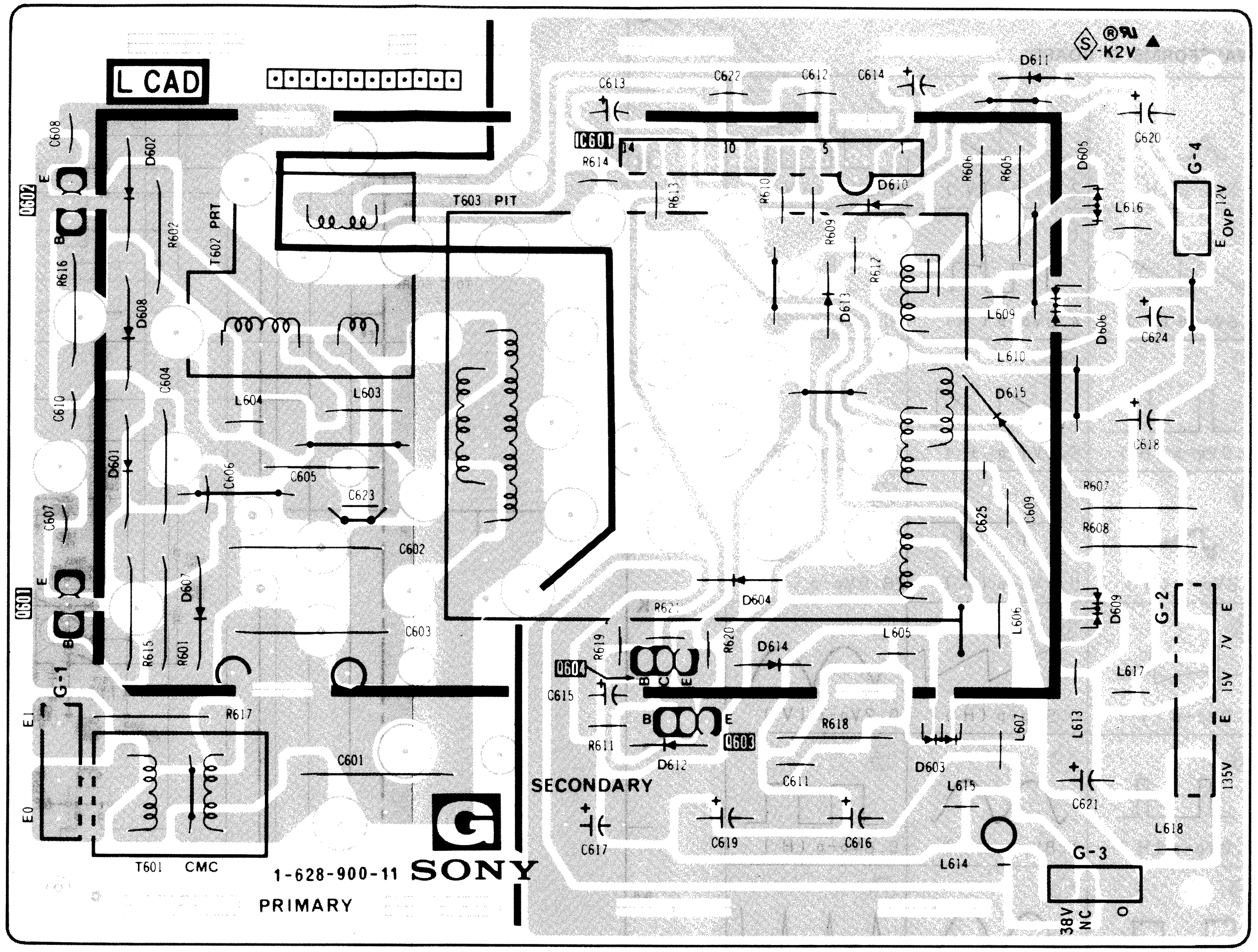

IC201
IC203
IC1401
IC202
IC204
IC1402
IC1403
IC1404
IC1405
J-53
J-54
J-52
J-51
J-57
J-1401
J-1402
J-1403
J-1404
+12V OUT CONTROL
S1801
CAD
J
SONY
1-636-579-11

-G Board-

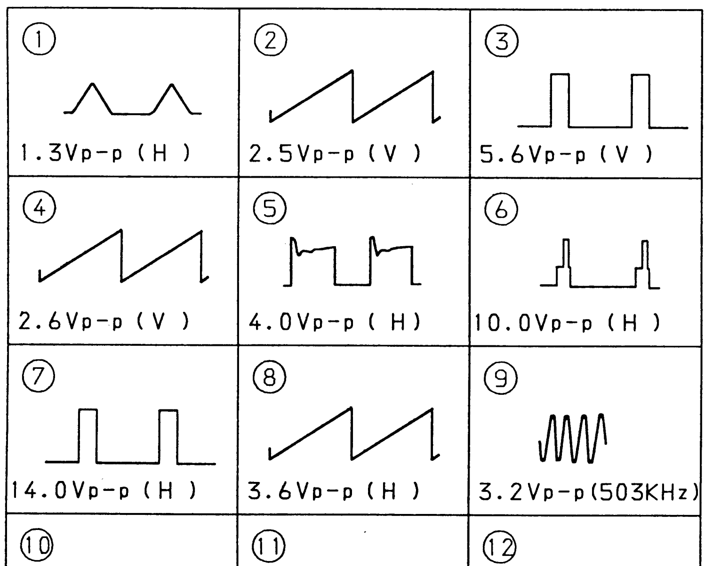

L CAD
T603
T602 PRT
T601
CMC
L603
L604
G-1
1-628-900-11
SON
PRIMARY

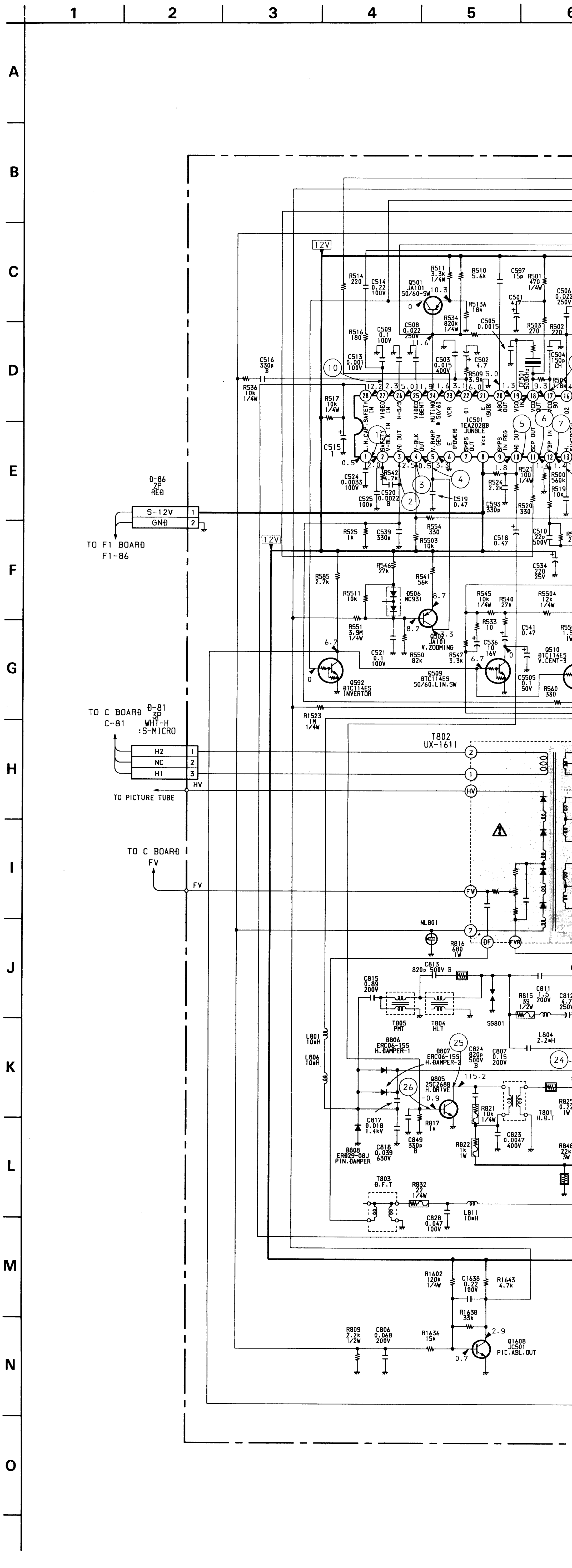

J-53
J-54
J-22
J-51
J-1404
IC203
IC204
IC202
IC1404
IC1402
IC1403
IC1410
H/P R OUT
GND
H/P L OUT
FRONT/REAR
C (F) IN
GND
AV (F) IN
L IN
GND
R IN
Y (F) IN
MODE 1
MODE 2
GND
SDA
SCL
4 LEVEL
R
G
B
BLK
GND
C OUT
GND
Y OUT
GND
V OUT
GND
V TV IN
CAD
J
SONY
1-636-579-11

—G Board—

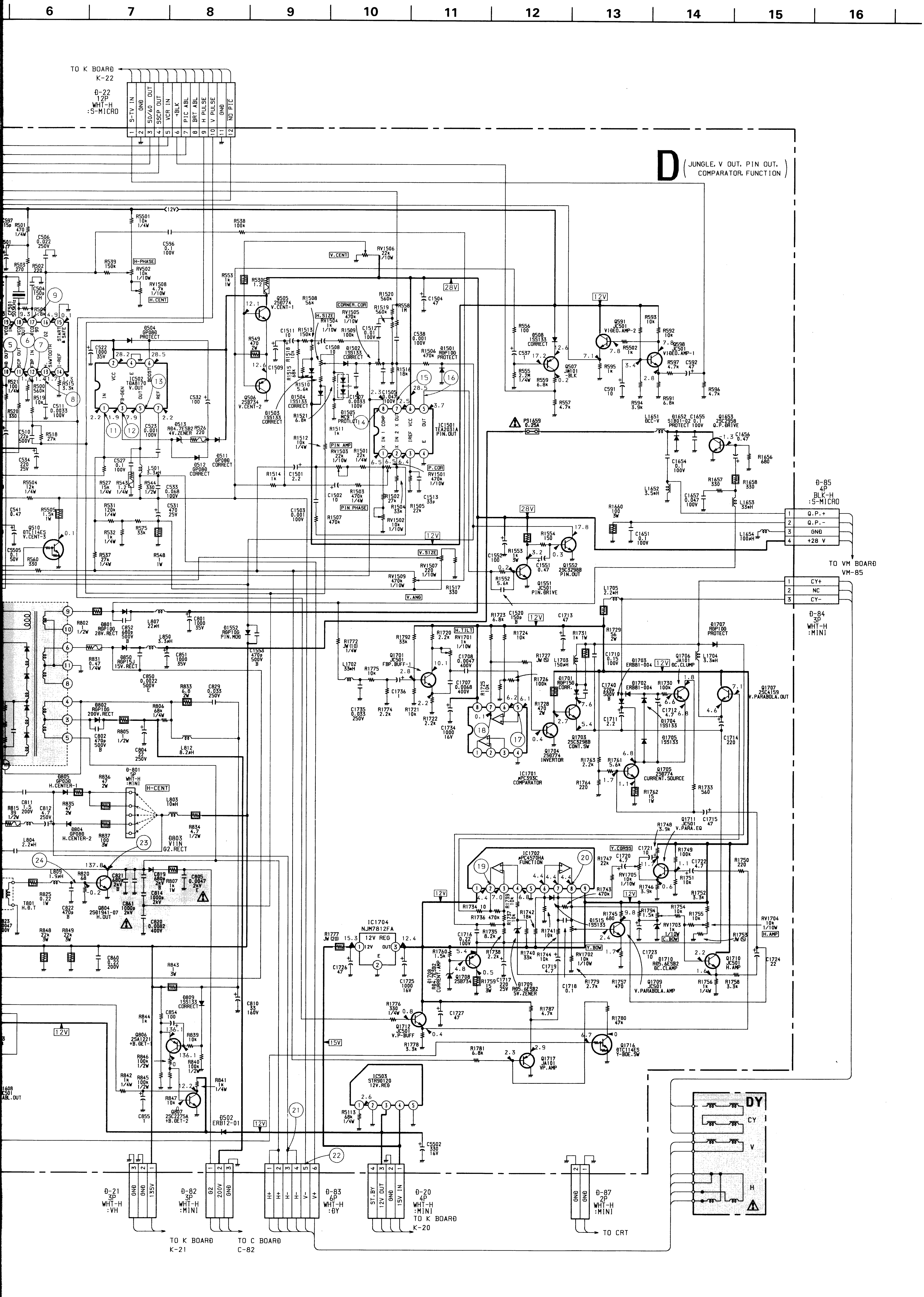

L CAD
K2V
IC601
T603 PIT
T602 PRT
T601 CMC
Q601
Q602
Q603
Q604
D601
D602
D603
D604
D605
D606
D607
D608
D609
D610
D611
D612
D613
D614
D615
L603
L604
L605
L606
L607
L609
L610
L613
L614
L615
L616
L617
L618
C601
C602
C603
C604
C605
C606
C607
C608
C609
C610
C611
C612
C613
C614
C615
C616
C617
C618
C619
C620
C621
C622
C623
C624
C625
R601
R602
R605
R606
R607
R608
R609
R610
R611
R612
R613
R614
R615
R616
R617
R618
R619
R620
R621
G-1
G-2
G-3
G-4
E0
E1
E
OVP 12V
E
7V
15V
E
135V
38V
NC
O
SECONDARY
PRIMARY
G
SONY
1-628-900-11

- **WAVEFORMS D BOARD**



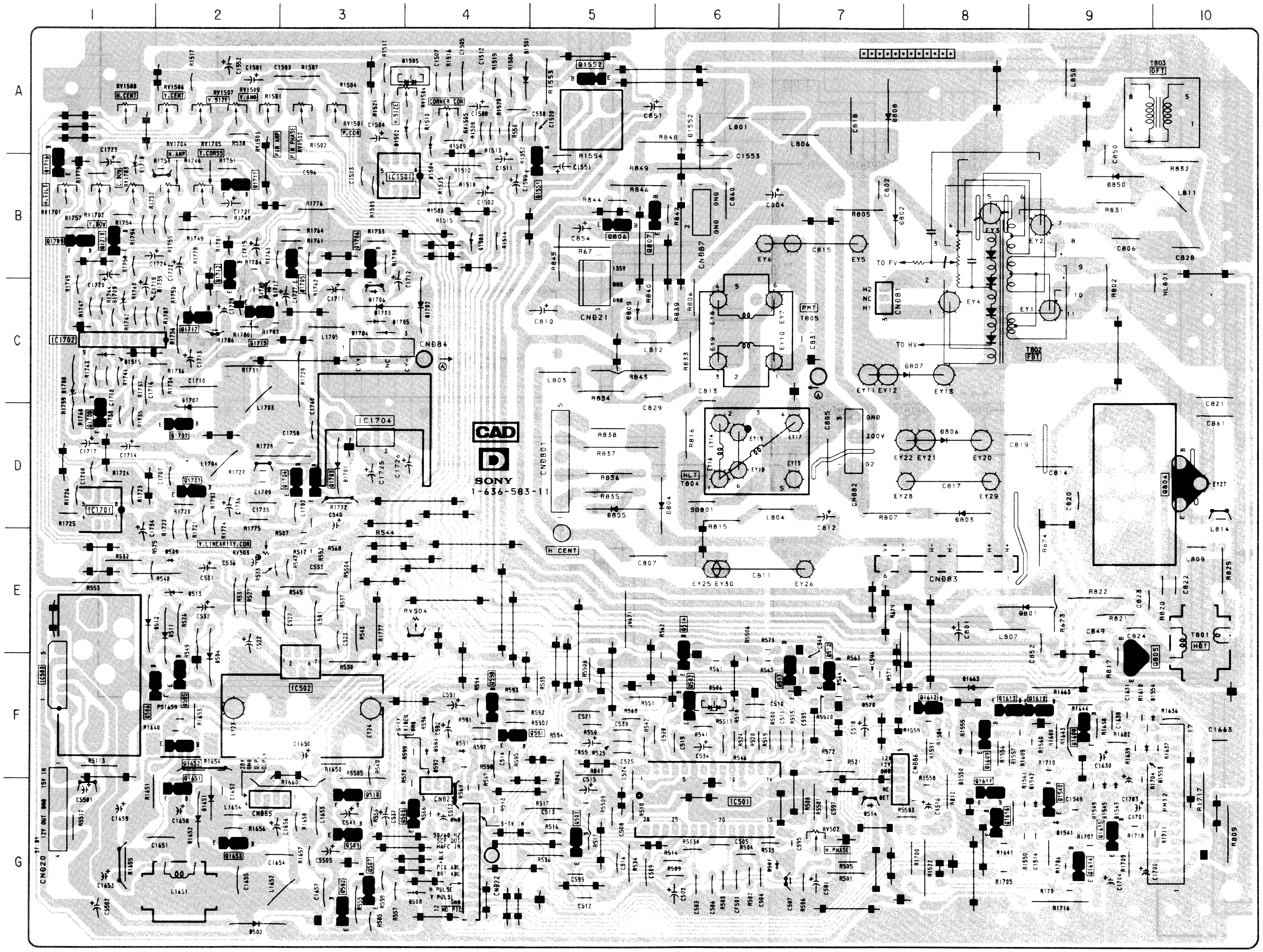


1
2
3
4
5
6
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
12V
D-86
2P
RED
S-12V
GND
TO F1 BOARD
F1-86
TO C BOARD D-81
3P
WHT-H
C-81
:S-MICRO
H2
NC
H1
HV
TO PICTURE TUBE
TO C BOARD
FV
IC501
TEA2028B
JUNGLE
Q501
JA101
50/60-SW
Q506
MC931
Q502
JA101
V.ZOOMING
Q592
DTC114ES
INVERTOR
Q509
DTC114ES
50/60.LIN.SW
Q510
DTC114ES
V.CENT
T802
UX-1611
NL801
R816
680
1W
C813
820p 500V B
T805
PMT
T804
HLT
SG801
D806
ERC06-15S
H.DAMPER-1
D807
ERC06-15S
H.DAMPER-2
Q805
2SC2688
H.DRIVE
115.2
-0.9
T801
H.D.T
D808
ERB29-08J
PIN.DAMPER
T803
D.F.T
R832
22
1/4W
L811
10mH
C828
0.047
100V
L801
10mH
L806
10mH
L804
2.2mH
R1523
1M
1/4W
R1602
120k
1/4W
C1638
0.22
100V
R1643
4.7k
R1638
33k
R1636
15k
R809
2.2k
1/2W
C806
0.068
200V
Q1608
JC501
PIC.ABL.OUT
2.9
0.7

6
7
8
9
10
11
12
13
14
15
16
D
(JUNGLE, V OUT, PIN OUT, COMPARATOR, FUNCTION)
TO K BOARD K-22
D-22 12P WHT-H :S-MICRO
S-TV IN
GND
50/60 OUT
SSCP OUT
VCR IN
+BLK
PIC ABL
BRT ABL
H PULSE
V PULSE
GND
NO PIC
IC502 TDA8170 V.OUT
IC1501 TEA2031A PIN.OUT
IC1701 μPC393C COMPARATOR
IC1702 μPC4570HA FUNCTION
IC1704 NJM7812FA 12V REG
IC503 STR90120 12V.REG
Q505 2SB774 V.CENT-1
Q506 2SB734 V.CENT-2
Q510 DTC114ES V.CENT-3
Q507 JA101 -BLK
Q591 JC501 VIDEO.AMP-2
Q598 JC501 VIDEO.AMP-1
Q1653 2SC2958 Q.P.DRIVE
Q1552 2SC3298B PIN.OUT
Q1551 JC501 PIN.DRIVE
Q1701 JC501 FBP.BUFF-1
Q1703 2SC3298B CONT.SW
Q1704 2SD774 INVERTOR
Q1705 2SD774 CURRENT.SOURCE
Q1706 JA101 DC.CLUMP
Q1707 2SC4159 V.PARABOLA.OUT
Q1711 JC501 V.PARA.EQ
Q1708 2SB734 CURRENT.AMP
Q1709 JC501 V.PARABOLA.AMP
Q1710 JC501 H.AMP
Q1712 JC501 V.P-BUFF
Q1716 DTC114ES Y-BOE.SW
Q1717 JA101 VP.AMP
Q804 2SD1941-07 H.OUT
Q806 2SA1221 +B.DET-1
Q807 2SC2275A +B.DET-2
H-PHASE
H.CENT
V.CENT
CORNER.COR
H.SIZE
PIN AMP
PIN PHASE
P.COR
V.SIZE
V.ANG
H.TILT
Y.CORSS
C.BOW
Y.BOW
H.AMP
H-CENT
PS1659 0.25A
D-85 4P BLK-H :S-MICRO
Q.P.+
Q.P.-
GND
+28 V
TO VM BOARD VM-85
CY+
NC
CY-
D-84 3P WHT-H :MINI
DY
CY
V
H
T801 H.B.T
D-21 3P WHT-H :VH
GND
GND
135V
D-82 3P WHT-H :MINI
G2
200V
GND
D-83 6P WHT-H :DY
H+
H+
H-
H-
V-
V+
D-20 4P WHT-H :MINI
TO K BOARD K-20
ST.BY
12V OUT
GND
15V IN
D-87 2P WHT-H :MINI
GND
GND
TO CRT
TO K BOARD K-21
TO C BOARD C-82
12V
28V
15V

D [JUNGLE, V OUT, PIN OUT, COMPARATOR, FUNCTION]

–D Board–

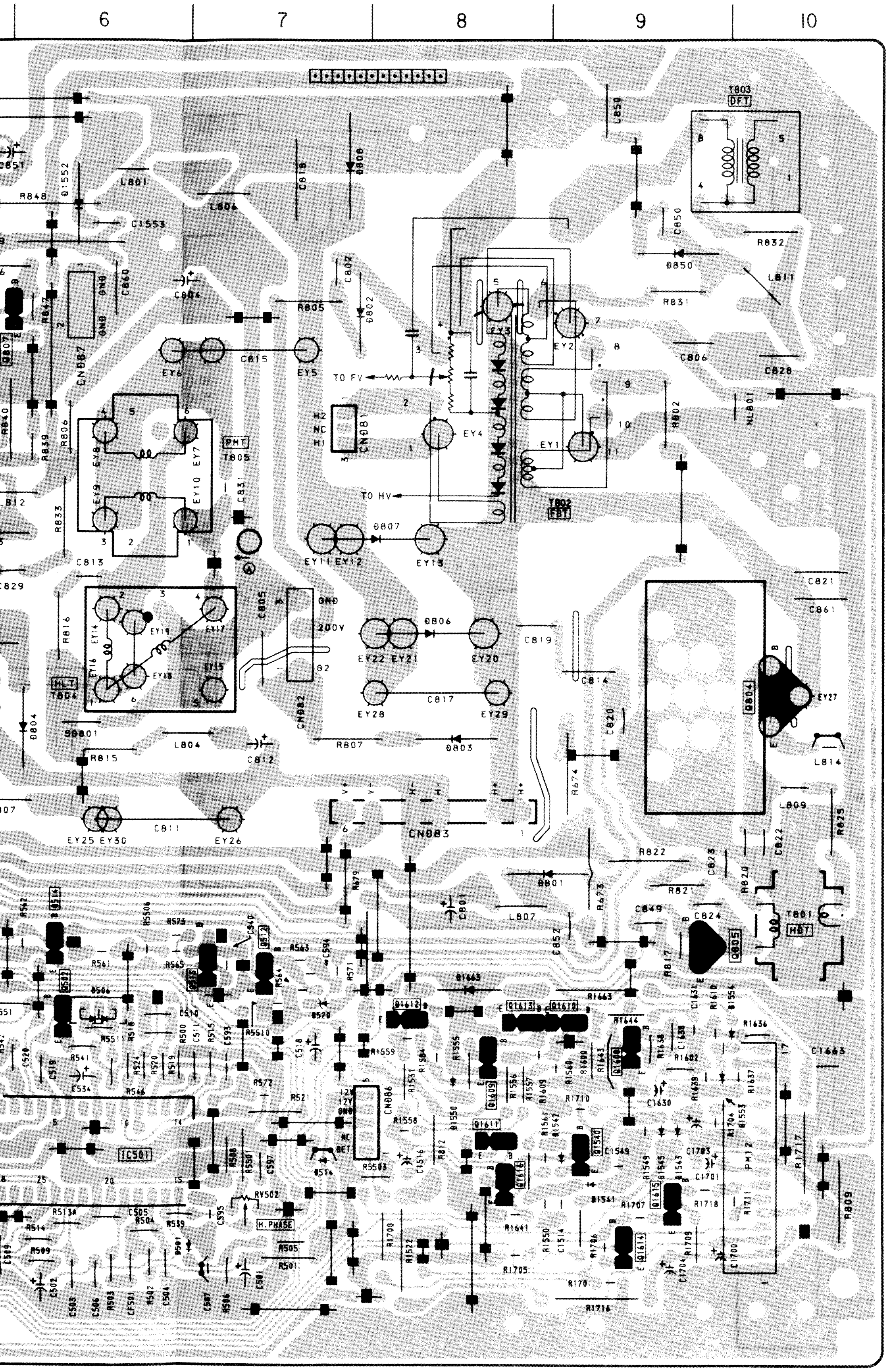

1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
CAD
D
SONY
1-636-583-11
IC501
IC502
IC1501
IC1701
IC1702
IC1706
T801 HOT
T802 FBT
T803 DFT
T804 HLT
T805 PMT
CN083
CN085
CN086
CN801
CN802
CN807
CN821
CN822
CN020
CN503
H CENT
V.LINEARITY.COR
H.PHASE
CORNER COR
PIN AMP
PIN PHASE
TO FV
TO HV

IC	
IC501	G-6
IC502	F-3
IC503	F-1
IC1501	B-3
IC1701	D-1
IC1702	C-1
IC1704	D-3

TRANSISTOR	
Q501	G-5
Q502	F-6
Q505	F-2
Q506	F-2
Q507	G-3
Q509	G-3
Q510	G-3
Q591	F-4
Q592	G-3
Q598	F-4
Q804	D-10
Q805	E-9
Q806	B-5
Q807	B-5
Q1551	B-5
Q1552	A-5
Q1608	F-9
Q1653	G-2
Q1701	D-2
Q1703	D-3
Q1704	D-3
Q1705	B-3
Q1706	B-3
Q1707	D-2
Q1708	D-1
Q1709	B-1
Q1710	B-1
Q1711	B-2
Q1712	B-2
Q1716	B-1
Q1717	C-2

DIODE	
D501	G-6
D502	G-2
D504	E-2
D506	F-6
D508	G-4
D511	E-2
D512	E-1
D513	E-2
D801	E-8
D802	B-7
D803	D-8
D804	D-6
D805	D-5
D806	D-8
D807	C-8
D808	A-7
D809	C-5
D850	B-9
D1501	A-4
D1502	A-3
D1503	B-4
D1504	B-4
D1505	A-3
D1515	C-1
D1552	A-6
D1652	G-2
D1701	D-3
D1702	C-4
D1703	C-3
D1704	C-3
D1705	C-3
D1707	D-2
D1708	C-1
D1709	C-1
D1710	B-1

VARIABLE RESISTOR	
RV502	G-7
RV1501	A-3
RV1502	A-3
RV1503	A-2
RV1504	A-4
RV1505	A-4
RV1506	A-2
RV1507	A-2
RV1508	A-1
RV1509	A-2
RV1701	B-1
RV1702	B-1
RV1703	B-1
RV1704	B-2
RB1705	B-2


6
7
8
9
10
T803 DFT
T802 FBT
T801 HBT
T804 HLT
T805 PMT
CN881
CN882
CN883
CN886
IC501
H.PHASE
RV502
TO FV
TO HV

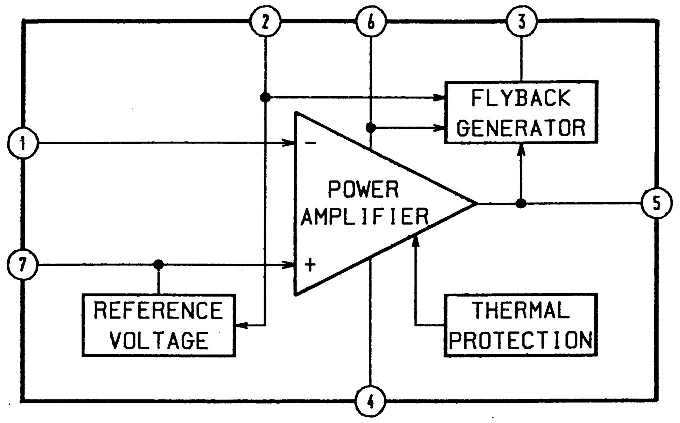
IC	
IC501	G−6
IC502	F−3
IC503	F−1
IC1501	B−3
IC1701	D−1
IC1702	C−1
IC1704	D−3

TRANSISTOR	
Q501	G−5
Q502	F−6
Q505	F−2
Q506	F−2
Q507	G−3
Q509	G−3
Q510	G−3
Q591	F−4
Q592	G−3
Q598	F−4
Q804	D−10
Q805	E−9
Q806	B−5
Q807	B−5
Q1551	B−5
Q1552	A−5
Q1608	F−9
Q1653	G−2
Q1701	D−2
Q1703	D−3
Q1704	D−3
Q1705	B−3
Q1706	B−3
Q1707	D−2
Q1708	D−1
Q1709	B−1
Q1710	B−1
Q1711	B−2
Q1712	B−2
Q1716	B−1
Q1717	C−2

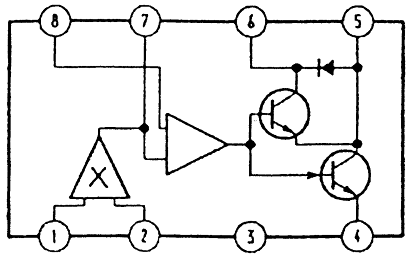
DIODE	
D501	G−6
D502	G−2
D504	E−2
D506	F−6
D508	G−4
D511	E−2
D512	E−1
D513	E−2
D801	E−8
D802	B−7
D803	D−8
D804	D−6
D805	D−5
D806	D−8
D807	C−8
D808	A−7
D809	C−5
D850	B−9
D1501	A−4
D1502	A−3
D1503	B−4
D1504	B−4
D1505	A−3
D1515	C−1
D1552	A−6
D1652	G−2
D1701	D−3
D1702	C−4
D1703	C−3
D1704	C−3
D1705	C−3
D1707	D−2
D1708	C−1
D1709	C−1
D1710	B−1

VARIABLE RESISTOR	
RV502	G−7
RV1501	A−3
RV1502	A−3
RV1503	A−2
RV1504	A−4
RV1505	A−4
RV1506	A−2
RV1507	A−2
RV1508	A−1
RV1509	A−2
RV1701	B−1
RV1702	B−1
RV1703	B−1
RV1704	B−2
RB1705	B−2

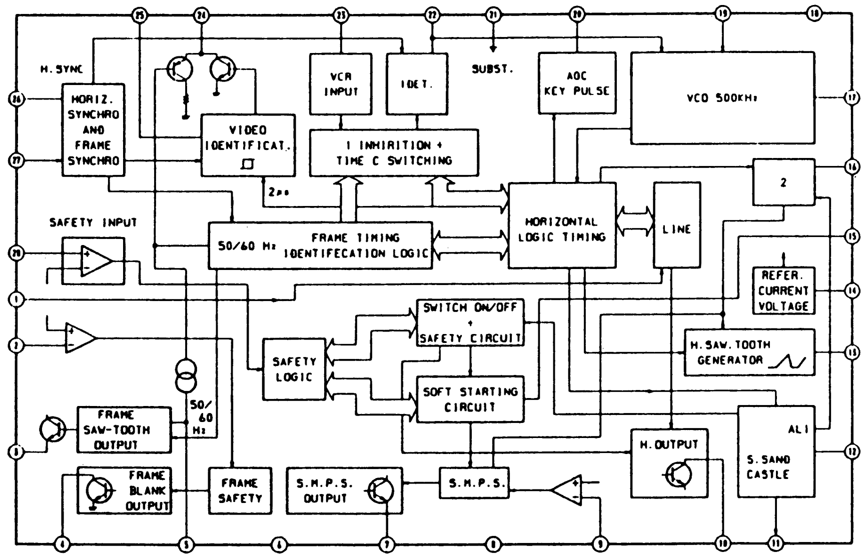
D BOARD IC502 TD8170

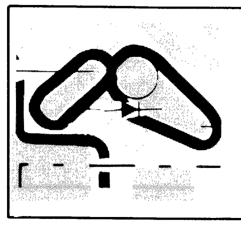

1
2
3
4
5
6
7
FLYBACK GENERATOR
POWER AMPLIFIER
REFERENCE VOLTAGE
THERMAL PROTECTION
−
+

D BOARD IC1501 TEA2031A

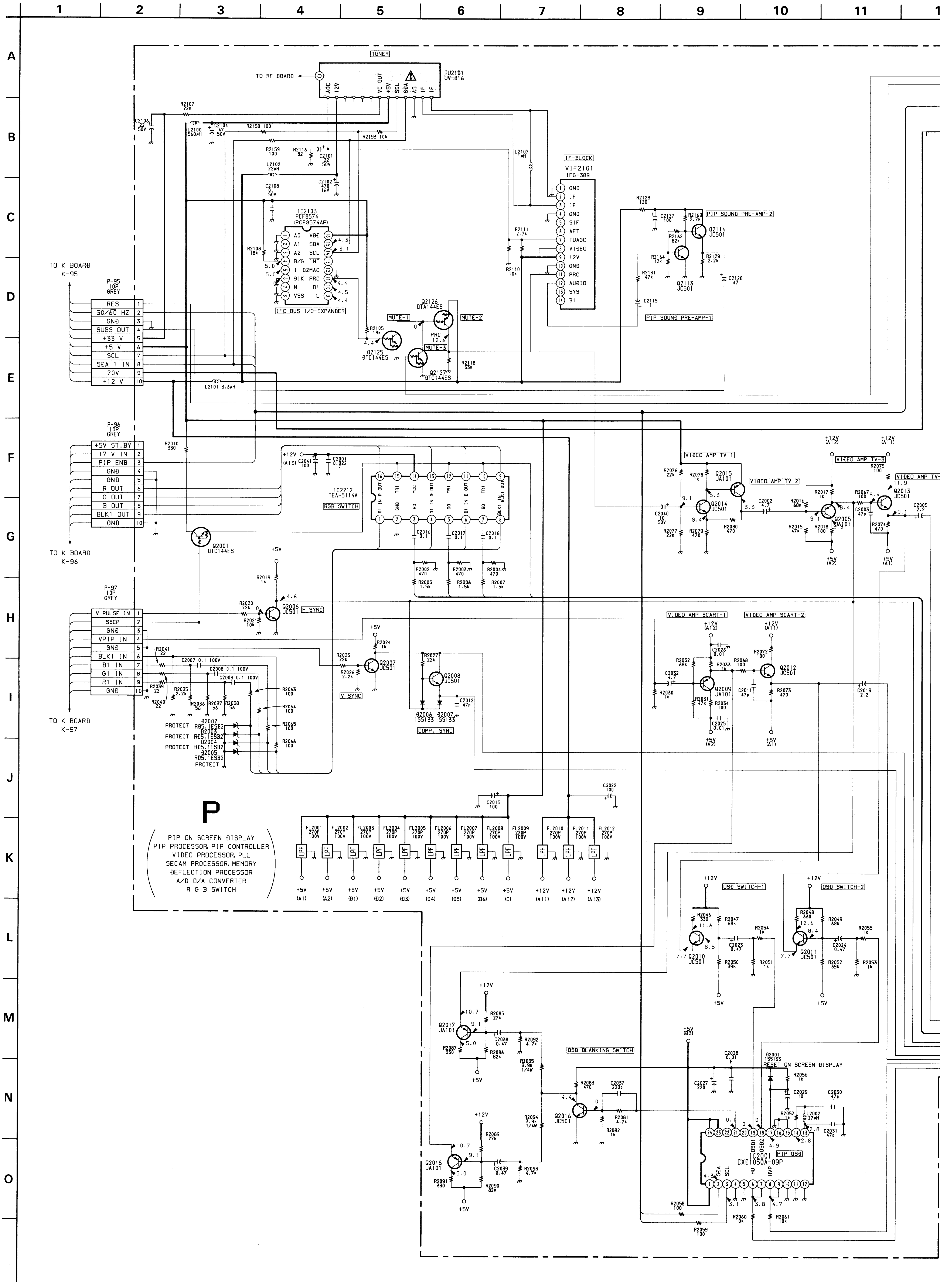


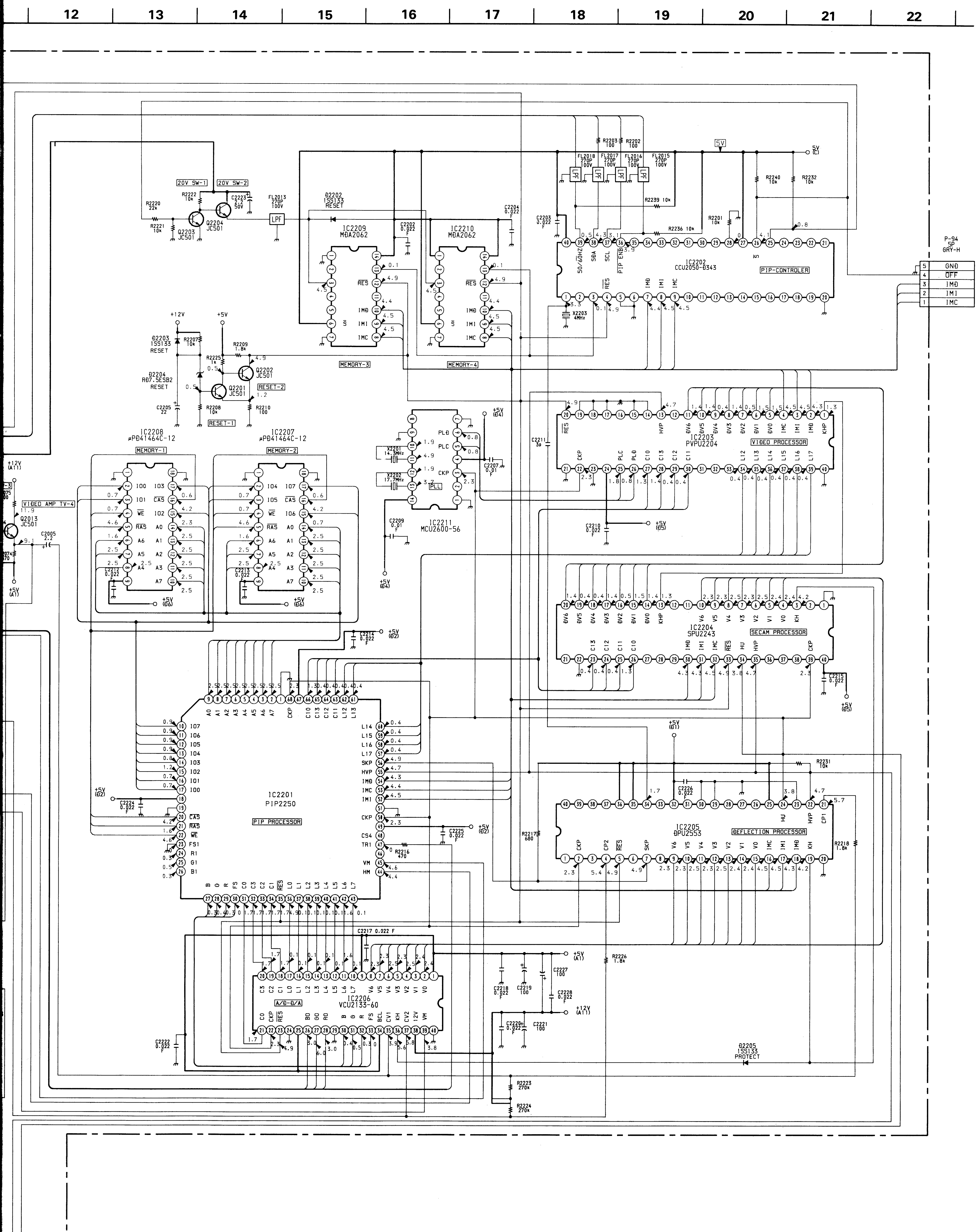
D BOARD IC501 TEA2028B


H.SYNC
HORIZ. SYNCHRO AND FRAME SYNCHRO
VIDEO IDENTIFICAT.
VCR INPUT
IDET.
SUBST.
AGC KEY PULSE
VCO 500KHz
I INHIBITION + TIME C SWITCHING
2fH
SAFETY INPUT
50/60 Hz
FRAME TIMING IDENTIFECATION LOGIC
HORIZONTAL LOGIC TIMING
LINE
2
REFER. CURRENT VOLTAGE
SWITCH ON/OFF + SAFETY CIRCUIT
SAFETY LOGIC
H.SAW.TOOTH GENERATOR
SOFT STARTING CIRCUIT
FRAME SAW-TOOTH OUTPUT
50/60 Hz
H.OUTPUT
ALI
S.SAND CASTLE
FRAME BLANK OUTPUT
FRAME SAFETY
S.M.P.S. OUTPUT
S.M.P.S.



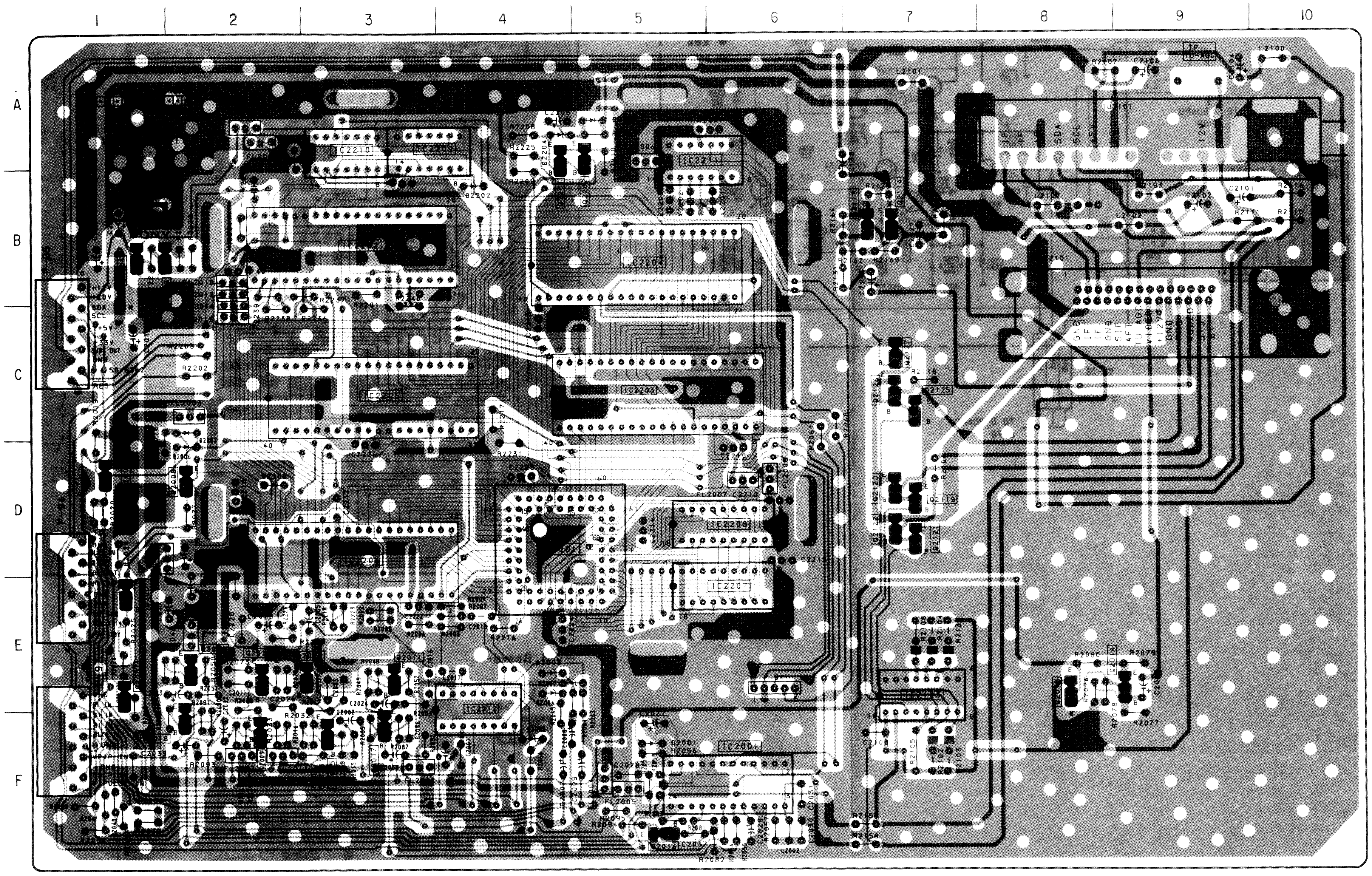
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.


TUNER
TO RF BOARD
TU2101
UV-816
AGC 12V VC OUT +5V SCL SDA AS IF IF
IF-BLOCK
VIF2101
IFG-389
GND IF IF GND SIF AFT TUAGC VIDEO 12V GND PRC AUDIO SYS B1
IC2103
PCF8574
(PCF8574AP)
A0 VDD A1 SDA A2 SCL B/G INT I D2MAC DIK PRC M B1 VSS L
I²C-BUS I/O-EXPANDER
MUTE-1
MUTE-2
MUTE-3
Q2125 DTC144ES
Q2126 DTA144ES
Q2127 DTC144ES
PIP SOUND PRE-AMP-1
PIP SOUND PRE-AMP-2
Q2113 JC501
Q2114 JC501
TO K BOARD K-95
P-95 10P GREY
RES
50/60 HZ
GND
SUBS OUT
+33 V
+5 V
SCL
SDA 1 IN
20V
+12 V
L2101 3.3µH
P-96 10P GREY
+5V ST.BY
+7 V IN
PIP ENB
GND
GND
R OUT
G OUT
B OUT
BLK1 OUT
GND
TO K BOARD K-96
IC2212
TEA-5114A
RGB SWITCH
Q2001 DTC144ES
H SYNC
Q2006 JC501
P-97 10P GREY
V PULSE IN
SSCP
GND
VPIP IN
GND
BLK1 IN
B1 IN
G1 IN
R1 IN
GND
TO K BOARD K-97
PROTECT RD5.1ESB2
V SYNC
Q2007 JC501
Q2008 JC501
D2006 D2007 1SS133 1SS133
COMP. SYNC
VIDEO AMP TV-1
VIDEO AMP TV-2
VIDEO AMP TV-3
Q2014 JC501
Q2015 JA101
Q2005 JA101
Q2013 JC501
VIDEO AMP SCART-1
VIDEO AMP SCART-2
Q2009 JA101
Q2012 JC501
P
PIP ON SCREEN DISPLAY
PIP PROCESSOR, PIP CONTROLLER
VIDEO PROCESSOR, PLL
SECAM PROCESSOR, MEMORY
DEFLECTION PROCESSOR
A/D D/A CONVERTER
R G B SWITCH
FL2001–FL2012 270P 100V LPF
+5V (A1) +5V (A2) +5V (D1) +5V (D2) +5V (D3) +5V (D4) +5V (D5) +5V (D6) +5V (C) +12V (A11) +12V (A12) +12V (A13)
OSD SWITCH-1
OSD SWITCH-2
Q2010 JC501
Q2011 JC501
Q2017 JA101
Q2018 JA101
OSD BLANKING SWITCH
Q2016 JC501
D2001 1SS133
RESET ON SCREEN DISPLAY
IC2001
CXD1050A-09P
PIP OSD
SDA SCL HD VHP OSD1 OSD2
1 2 3 4 5 6 7 8 9 10 11
A B C D E F G H I J K L M N O


12
13
14
15
16
17
18
19
20
21
22
20V SW-1
20V SW-2
R2222 10k
C2223 2.2 50V
R2220 22k
R2221 10k
Q2203 JC501
Q2204 JC501
FL2013 270P 100V
LPF
D2202 1SS133 RESET
IC2209 MDA2062
IC2210 MDA2062
C2202 0.022 F
C2204 0.022 F
MEMORY-3
MEMORY-4
RES
IMD
IMI
IMC
+12V
+5V
D2203 1SS133 RESET
R2207 10k
R2209 1.8k
R2225 1k
Q2202 JC501
Q2201 JC501
D2204 RD7.5ESB2 RESET
RESET-1
RESET-2
C2205 22
R2208 10k
R2210 100
R2203 100
R2202 100
FL2018 270P 100V
FL2017 270P 100V
FL2016 270P 100V
FL2015 270P 100V
5V
5V (C)
R2240 10k
R2232 10k
R2239 10k
R2236 10k
R2201 10k
C2203 0.022 F
IC2202 CCU2050-0343
PIP-CONTROLER
50/60HZ
SDA
SCL
PIP ENB
X2203 4MHz
P-94 5P GRY-H
5 GND
4 OFF
3 IMD
2 IMI
1 IMC
IC2208 μPD41464C-12
IC2207 μPD41464C-12
MEMORY-1
MEMORY-2
IO0 IO1 IO2 IO3 IO4 IO5 IO6 IO7
CAS RAS WE
A0 A1 A2 A3 A4 A5 A6 A7
C2212 0.022
C2213 0.022
+5V (D6)
+12V (A11)
VIDEO AMP TV-4
Q2013 JC501
C2005 2.2
+5V (A1)
IC2211 MCU2600-56
X2201 14.3MHz
X2202 17.7MHz
PLD PLC CKP
PLL
C2207 0.01 F
C2209 0.01 F
+5V (D4)
C2211 3p
IC2203 PVPU2204
VIDEO PROCESSOR
DV6 DV5 DV4 DV3 DV2 DV1 DV0 KHP HVP
L12 L13 L14 L15 L16 L17 C10 C11 C12 C13 PLC PLD CKP
C2210 0.022 F
+5V (D5)
IC2204 SPU2243
SECAM PROCESSOR
V6 V5 V4 V3 V2 V1 V0 KH HU
C2215 0.022 F
C2214 0.022 F
+5V (D2)
IC2201 PIP2250
PIP PROCESSOR
L14 L15 L16 L17 SKP HVP IMD IMC IMI CKP CS4 TR1 VM HM
C2224 0.022 F
FS1 R1 G1 B1
C2225 0.022 F
R2216 470
+5V (D1)
R2231 10k
C2226 0.022 F
IC2205 DPU2553
DEFLECTION PROCESSOR
R2217 680
R2218 1.8k
CKP CP2 RES SKP HVP CP1
C2217 0.022 F
IC2206 VCU2133-60
A/D-D/A
C3 C2 C1 C0 L0 L1 L2 L3 L4 L5 L6 L7
CO CKP RES BO GO RO B G R FS BCL CV1 KH CV2 12V VM
C2222 0.022 F
C2227 100
C2218 0.022 F
C2219 100
C2228 0.022 F
C2220 0.022 F
C2221 100
+5V (A1)
+12V (A11)
R2226 1.8k
D2205 1SS133 PROTECT
R2223 270k
R2224 270k

P [PIP ON SCREEN DISPLAY, PIP PROCESSOR, PIP CONTROLLER, VIDEO PROCESSOR, PLL, SECAM PROCESSOR, MEMORY, DEFLECTION PROCESSOR, A/D D/A CONVERTOR, RGB SWITCH]

–P Board–


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
IC2210
IC2209
IC2211
IC2202
IC2204
IC2205
IC2203
IC2201
IC2208
IC2207
IC2212
IC2001
L2101
L2100
L2102
C2101
C2102
C2106
R2107
TP
G-AGC
SDA
SCL
12V
GND
IF
STB
AFT
GND
Q2125
Q2119
Q2121
Q2120
R2202
R2231
FL2007
FL2005
C2108
R2080
R2079
R2077
R2078
R2001
R2056
R2082

IC

IC2001	F–6
IC2103	E–7
IC2201	D–4
IC2202	B–3
IC2203	C–5
IC2204	B–5
IC2205	C–3
IC2206	D–3
IC2207	E–6
IC2208	D–6
IC2209	A–3
IC2210	A–3
IC2211	A–5
IC2212	E–4

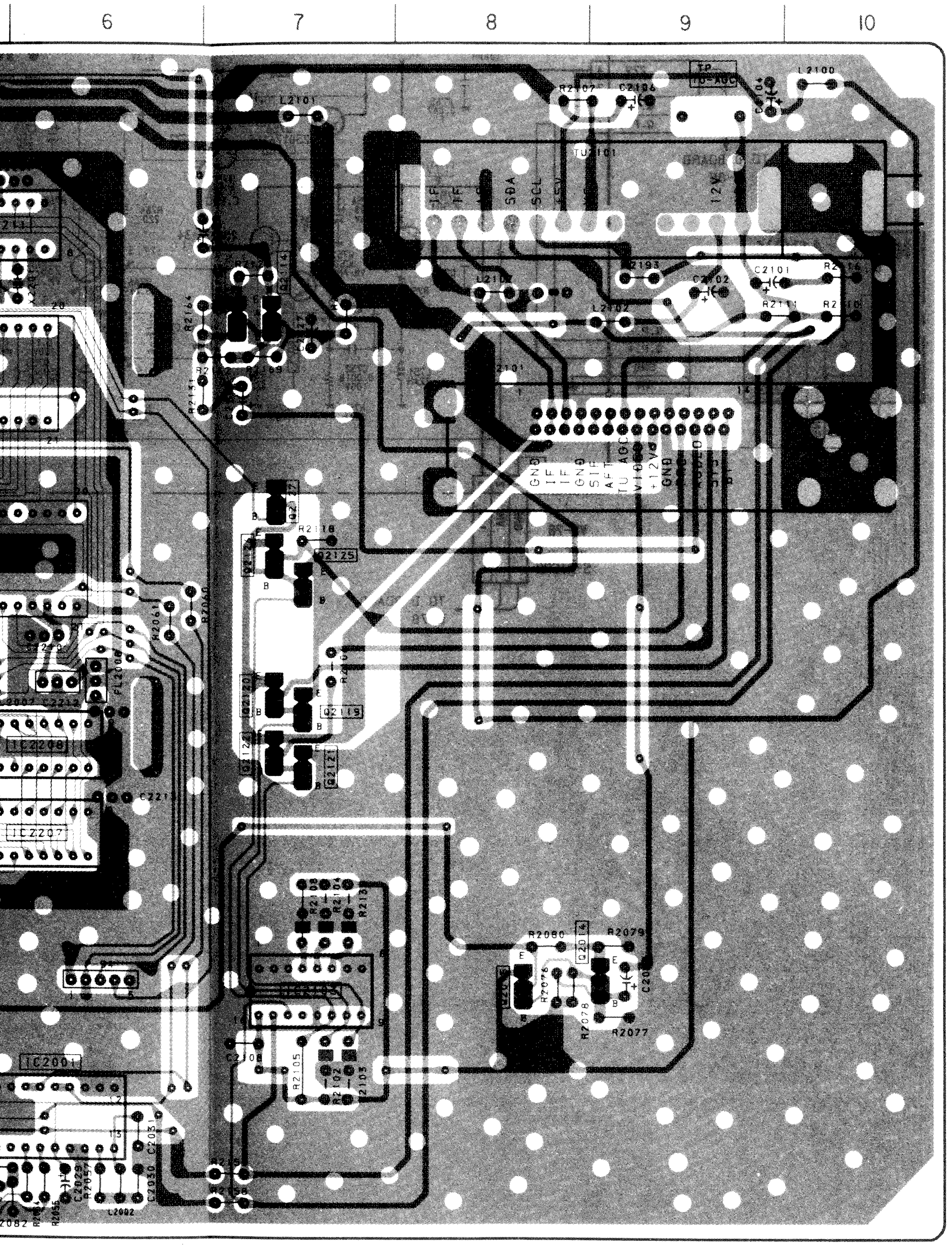
TRANSISTOR

Q2001	E–1
Q2002	
Q2003	
Q2004	
Q2005	F–3
Q2006	D–1
Q2007	E–1
Q2008	D–2
Q2009	F–2
Q2010	E–2
Q2011	E–3
Q2012	E–2
Q2013	E–3
Q2014	E–9
Q2015	E–8
Q2016	F–5
Q2017	F–3
Q2018	F–2
Q2113	B–7
Q2114	B–7
Q2125	C–7
Q2126	C–7
Q2127	C–7
Q2201	B–4
Q2202	B–5
Q2203	B–1
Q2204	B–1

DIODE

D2001	F–5
D2002	E–4
D2003	E–4
D2004	E–4
D2005	F–4
D2006	D–2
D2007	C–2
D2202	B–4
D2203	A–5
D2204	A–4
D2205	D–2

▨ : Pattern from the side which enables seeing.
■ : Pattern of the rear side.


6
7
8
9
10
IC2001
IC2207
IC2208
Q2125
TU101
GND
IF
GND
SIF
AFT
TU
V10
+12V
GND
SDA
SCL
R2079
R2077
R2080
C2104
C2101
L2100
L2101

▨ : Pattern from the side which enables seeing.

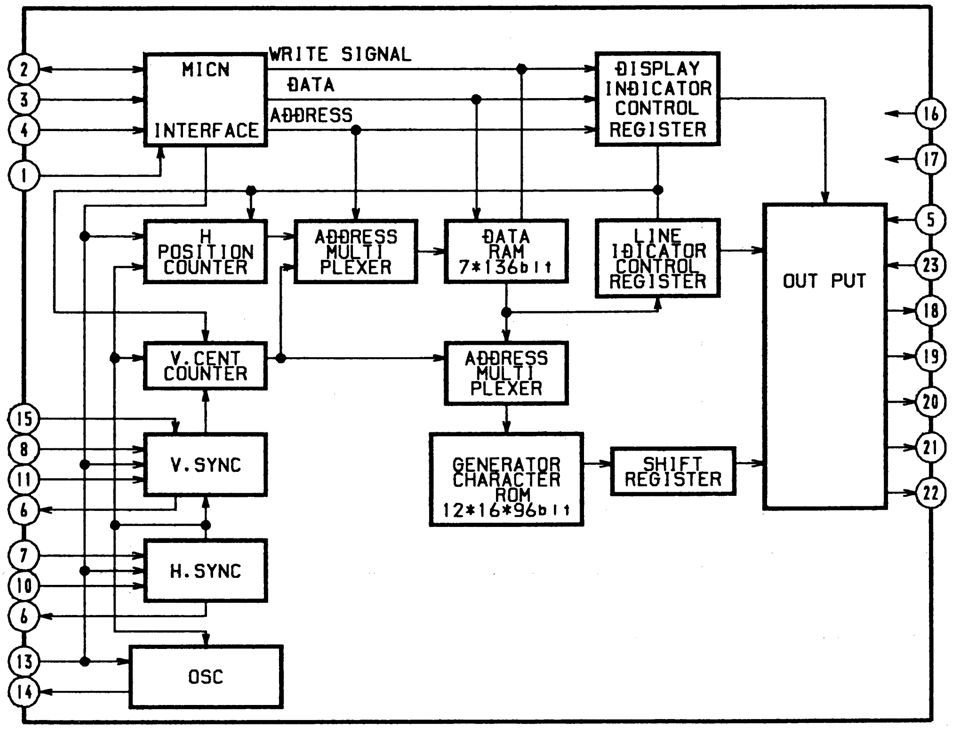
■ : Pattern of the rear side.

IC	
IC2001	F-6
IC2103	E-7
IC2201	D-4
IC2202	B-3
IC2203	C-5
IC2204	B-5
IC2205	C-3
IC2206	D-3
IC2207	E-6
IC2208	D-6
IC2209	A-3
IC2210	A-3
IC2211	A-5
IC2212	E-4

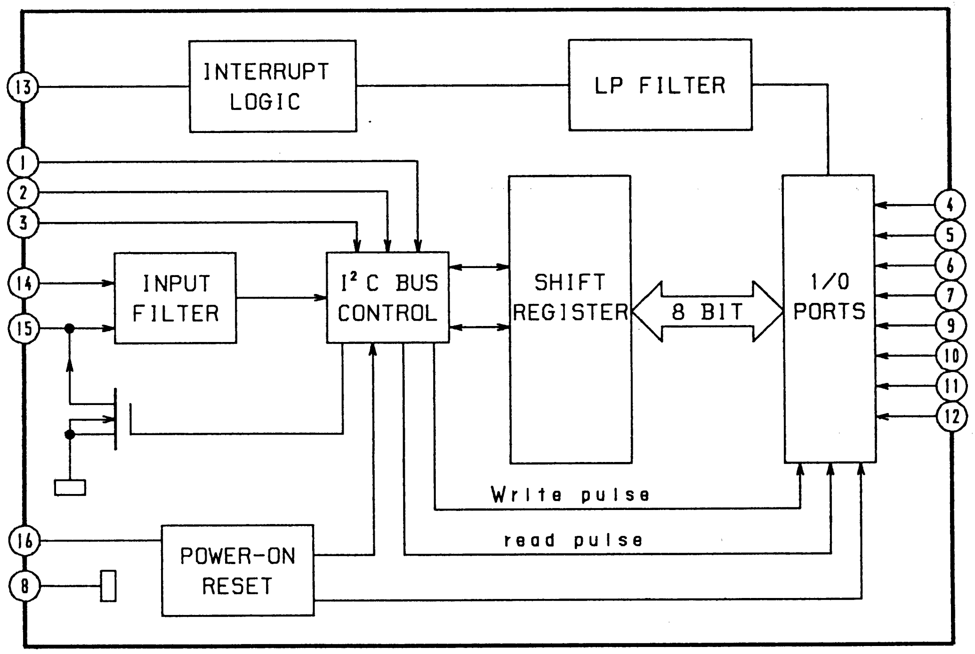
TRANSISTOR	
Q2001	E-1
Q2002	
Q2003	
Q2004	
Q2005	F-3
Q2006	D-1
Q2007	E-1
Q2008	D-2
Q2009	F-2
Q2010	E-2
Q2011	E-3
Q2012	E-2
Q2013	E-3
Q2014	E-9
Q2015	E-8
Q2016	F-5
Q2017	F-3
Q2018	F-2
Q2113	B-7
Q2114	B-7
Q2125	C-7
Q2126	C-7
Q2127	C-7
Q2201	B-4
Q2202	B-5
Q2203	B-1
Q2204	B-1

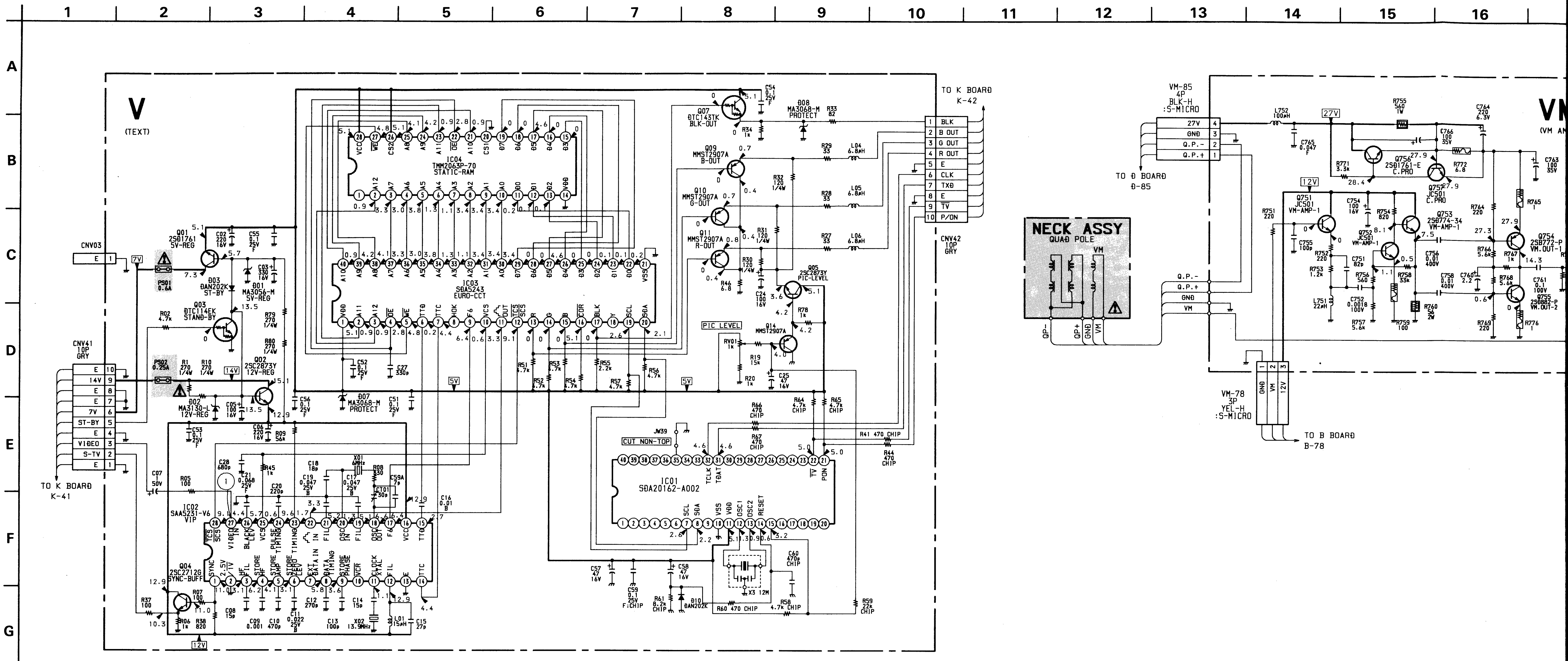
DIODE	
D2001	F-5
D2002	E-4
D2003	E-4
D2004	E-4
D2005	F-4
D2006	D-2
D2007	C-2
D2202	B-4
D2203	A-5
D2204	A-4
D2205	D-2

P BOARD IC2001 CXD1050A-09P

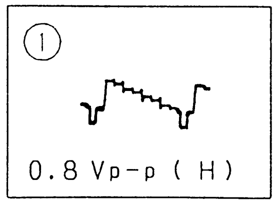

MICN
INTERFACE
WRITE SIGNAL
DATA
ADDRESS
DISPLAY INDICATOR CONTROL REGISTER
H POSITION COUNTER
ADDRESS MULTI PLEXER
DATA RAM 7*136bit
LINE IDICATOR CONTROL REGISTER
OUT PUT
V.CENT COUNTER
ADDRESS MULTI PLEXER
V.SYNC
GENERATOR CHARACTER ROM 12*16*96bit
SHIFT REGISTER
H.SYNC
OSC
2
3
4
1
15
8
11
6
7
10
6
13
14
16
17
5
23
18
19
20
21
22

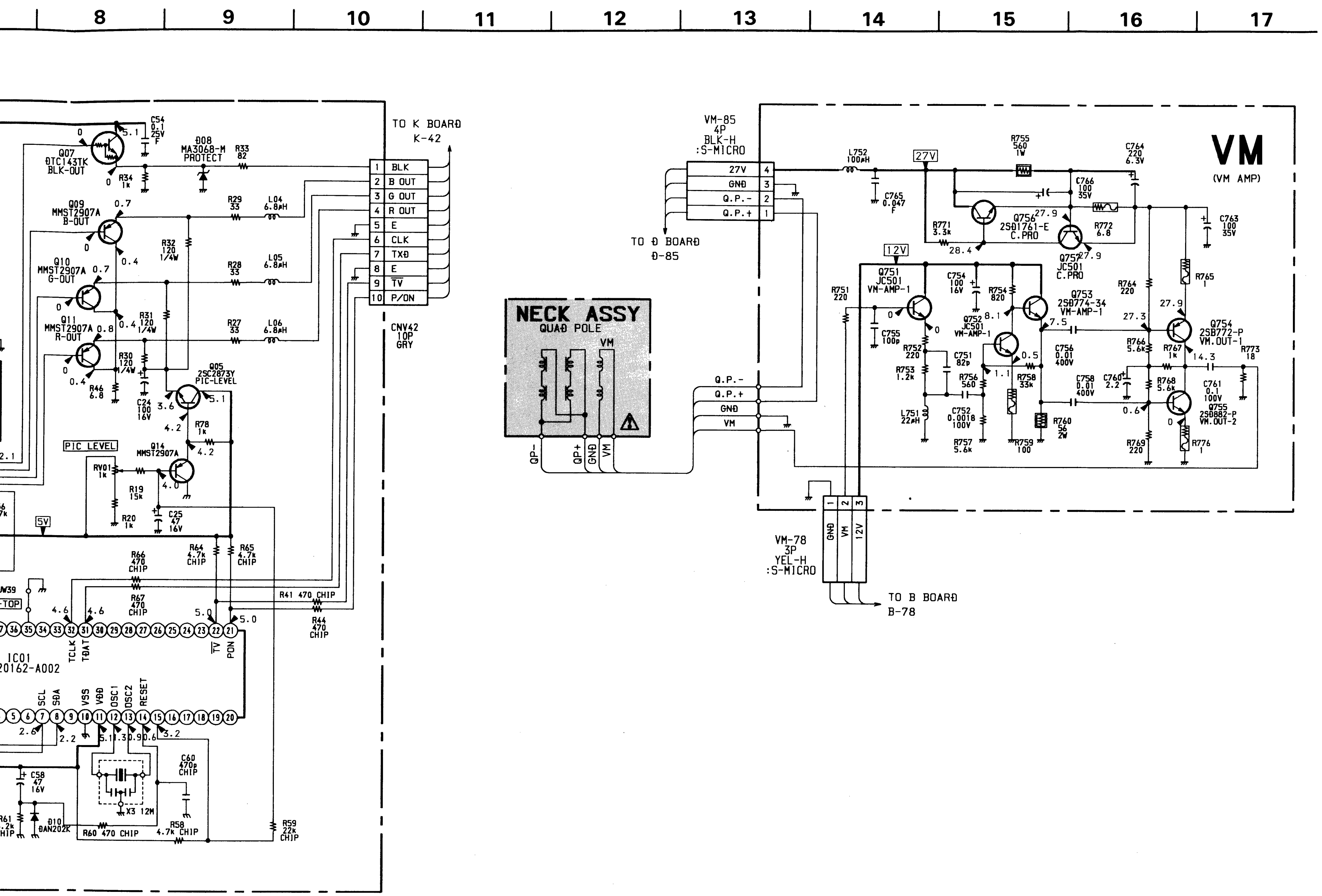
P BOARD IC2103 PCF8574


INTERRUPT LOGIC
LP FILTER
INPUT FILTER
I² C BUS CONTROL
SHIFT REGISTER
8 BIT
I/O PORTS
Write pulse
read pulse
POWER-ON RESET
13
1
2
3
14
15
16
8
4
5
6
7
9
10
11
12


V
(TEXT)
IC04
TMM2063P-70
STATIC-RAM
IC03
SDA5243
EURO-CCT
IC02
SAA5231-V6
VIP
IC01
SDA20162-A002
Q01
2SD1761
5V-REG
Q02
2SC2873Y
12V-REG
Q03
DTC114EK
STAND-BY
Q04
2SC2712G
SYNC-BUFF
Q05
2SC2873Y
PIC-LEVEL
Q07
DTC143TK
BLK-OUT
Q09
MMST2907A
B-OUT
Q10
MMST2907A
G-OUT
Q11
MMST2907A
R-OUT
Q14
MMST2907A
D08
MA3068-M
PROTECT
D07
MA3068-M
PROTECT
D01
MA3056-M
5V-REG
D02
MA3130-L
12V-REG
D03
DAN202K
ST-BY
PS01
0.6A
PS02
0.25A
CNV03
CNV41
10P
GRY
CNV42
10P
GRY
TO K BOARD
K-41
TO K BOARD
K-42
BLK
B OUT
G OUT
R OUT
E
CLK
TXD
E
TV
P/ON
14V
ST-BY
7V
VIDEO
S-TV
PIC LEVEL
CUT NON-TOP
5V
12V
NECK ASSY
QUAD POLE
VM
QP-
QP+
GND
VM-85
4P
BLK-H
:S-MICRO
TO D BOARD
D-85
27V
GND
Q.P.-
Q.P.+
VM-78
3P
YEL-H
:S-MICRO
TO B BOARD
B-78
VM
Q751
JC501
VM-AMP-1
Q752
JC501
VM-AMP-1
Q753
2SD774-34
VM-AMP-1
Q754
2SB772-P
VM.OUT-1
Q755
2SB882-P
VM.OUT-2
Q756
2SD1761-E
C.PRO
Q757
JC501
C.PRO
(VM AN

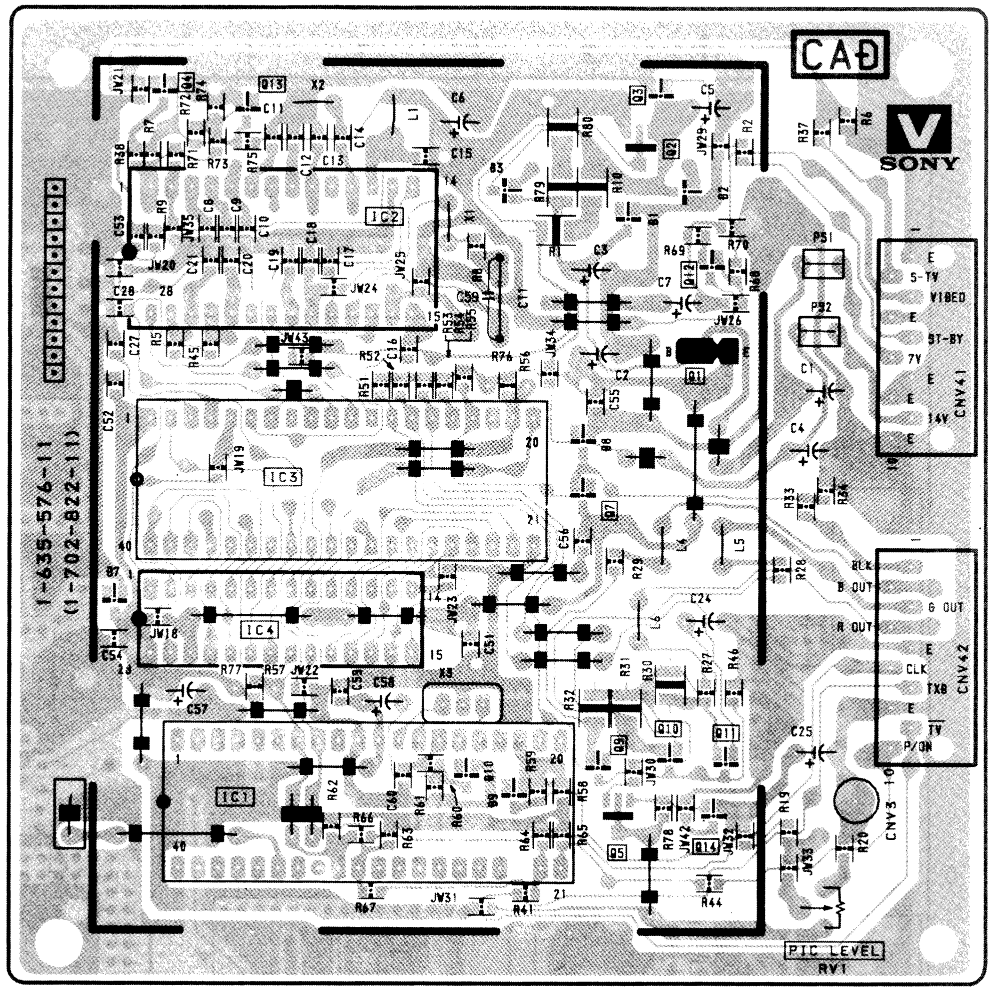
• WAVEFORMS V BOARD



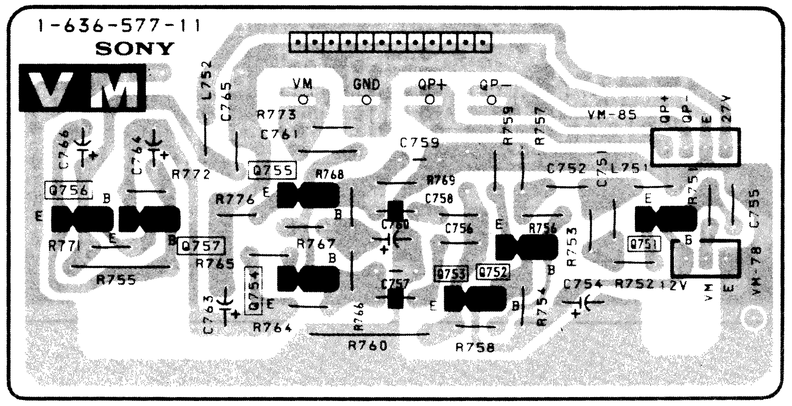

8
9
10
11
12
13
14
15
16
17
Q07 DTC143TK BLK-OUT
Q08 MA3068-M PROTECT
R33 82
R34 1k
C54 0.1 25V F
Q09 MMST2907A B-OUT
Q10 MMST2907A G-OUT
Q11 MMST2907A R-OUT
R29 33
L04 6.8μH
R28 33
L05 6.8μH
R27 33
L06 6.8μH
R32 120 1/4W
R31 120 1/4W
R30 120 1/4W
R46 6.8
C24 100 16V
Q05 2SC2873Y PIC-LEVEL
R78 1k
Q14 MMST2907A
PIC LEVEL
RV01 1k
R19 15k
R20 1k
C25 47 16V
5V
R66 470 CHIP
R64 4.7k CHIP
R65 4.7k CHIP
R67 470 CHIP
R41 470 CHIP
R44 470 CHIP
IC01
TCLK
TDAT
TV
PON
SCL
SDA
VSS
VDD
OSC1
OSC2
RESET
C58 47 16V
D10 DAN202K
R60 470 CHIP
R58 4.7k CHIP
X3 12M
C60 470p CHIP
R59 22k CHIP
TO K BOARD K-42
1 BLK
2 B OUT
3 G OUT
4 R OUT
5 E
6 CLK
7 TXD
8 E
9 TV
10 P/ON
CNV42 10P GRY
NECK ASSY
QUAD POLE
VM
QP-
QP+
GND
VM
VM-85 4P BLK-H :S-MICRO
27V
GND
Q.P.-
Q.P.+
TO D BOARD D-85
Q.P.-
Q.P.+
GND
VM
VM-78 3P YEL-H :S-MICRO
GND
VM
12V
TO B BOARD B-78
VM
(VM AMP)
L752 100μH
27V
C765 0.047 F
R755 560 1W
C764 220 6.3V
C766 100 35V
R771 3.3k
Q756 2SD1761-E C.PRO
Q757 JC501 C.PRO
R772 6.8
C763 100 35V
12V
Q751 JC501 VM-AMP-1
R751 220
C754 100 16V
R754 820
Q752 JC501 VM-AMP-1
Q753 2SB774-34 VM-AMP-1
R764 220
R765 1
Q754 2SB772-P VM.OUT-1
C755 100p
R752 220
R753 1.2k
C751 82p
R756 560
R758 33k
C756 0.01 400V
C758 0.01 400V
C760 2.2
R766 5.6k
R767 1k
R773 18
R768 5.6k
C761 0.1 100V
Q755 2SD882-P VM.OUT-2
L751 22μH
C752 0.0018 100V
R757 5.6k
R759 100
R760 56 2W
R769 220
R776 1

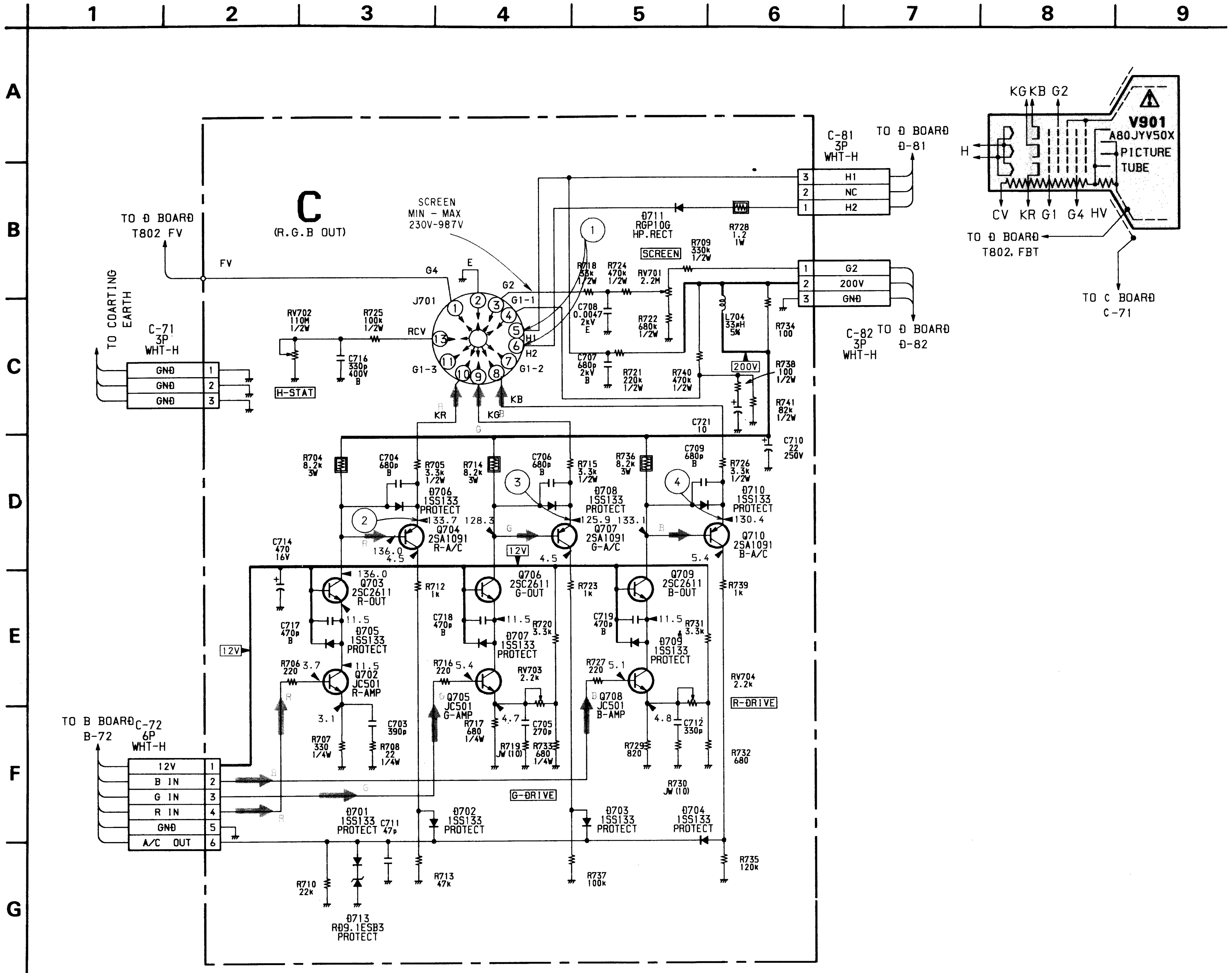
V [TEXT] VM [VM AMP]

-V Board-

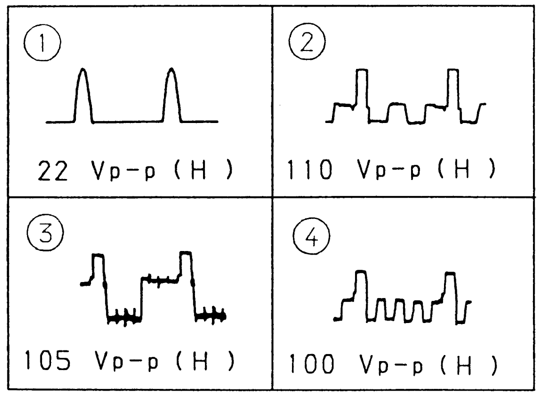

CAD
V
SONY
1-635-576-11
(1-702-822-11)
IC1
IC2
IC3
IC4
CNV41
CNV42
CNV3
E
S-TV
VIDEO
ST-BY
7V
14V
BLK
B OUT
R OUT
G OUT
CLK
TXD
TV
P/ON
PS1
PS2
PIC LEVEL
RV1

-VM Board-


1-636-577-11
SONY
VM
VM
GND
QP+
QP-
VM-85
VM-78
Q751
Q752
Q753
Q754
Q755
Q756
Q757
12V

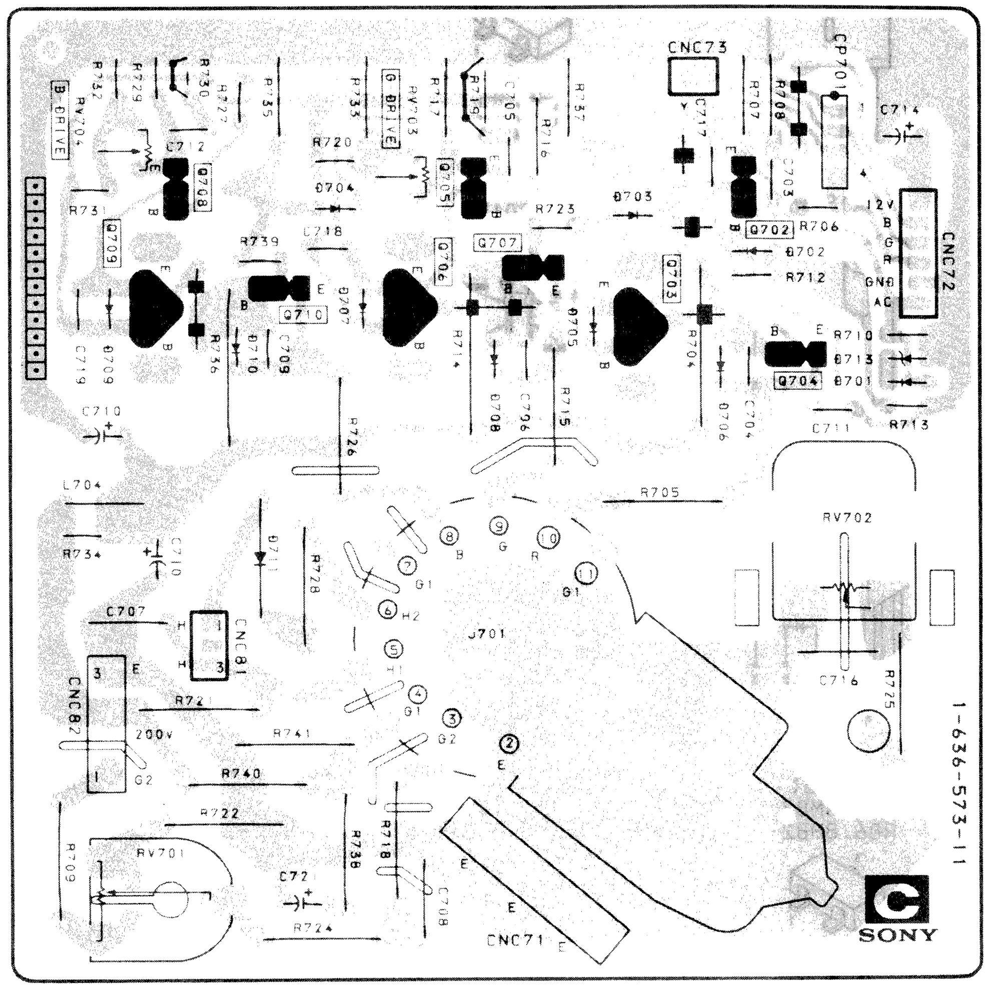

C
(R.G.B OUT)
TO Ð BOARD T802 FV
TO COARTING EARTH
C-71 3P WHT-H
GND
GND
GND
H-STAT
SCREEN MIN - MAX 230V-987V
J701
G4
G2
G1-1
G1-2
G1-3
RCV
H1
H2
KR
KG
KB
Ð711 RGP10G HP.RECT
SCREEN
C-81 3P WHT-H
TO Ð BOARD Ð-81
H1
NC
H2
C-82 3P WHT-H
TO Ð BOARD Ð-82
G2
200V
GND
200V
KG KB G2
V901 A80JYV50X PICTURE TUBE
CV KR G1 G4 HV
TO Ð BOARD T802, FBT
TO C BOARD C-71
Q703 2SC2611 R-OUT
Q706 2SC2611 G-OUT
Q709 2SC2611 B-OUT
Q704 2SA1091 R-A/C
Q707 2SA1091 G-A/C
Q710 2SA1091 B-A/C
Q702 JC501 R-AMP
Q705 JC501 G-AMP
Q708 JC501 B-AMP
Ð705 1SS133 PROTECT
Ð706 1SS133 PROTECT
Ð707 1SS133 PROTECT
Ð708 1SS133 PROTECT
Ð709 1SS133 PROTECT
Ð710 1SS133 PROTECT
Ð701 1SS133 PROTECT
Ð702 1SS133 PROTECT
Ð703 1SS133 PROTECT
Ð704 1SS133 PROTECT
Ð713 RD9.1ESB3 PROTECT
12V
R-DRIVE
G-DRIVE
TO B BOARD B-72
C-72 6P WHT-H
12V
B IN
G IN
R IN
GND
A/C OUT

• WAVEFORMS C BOARD

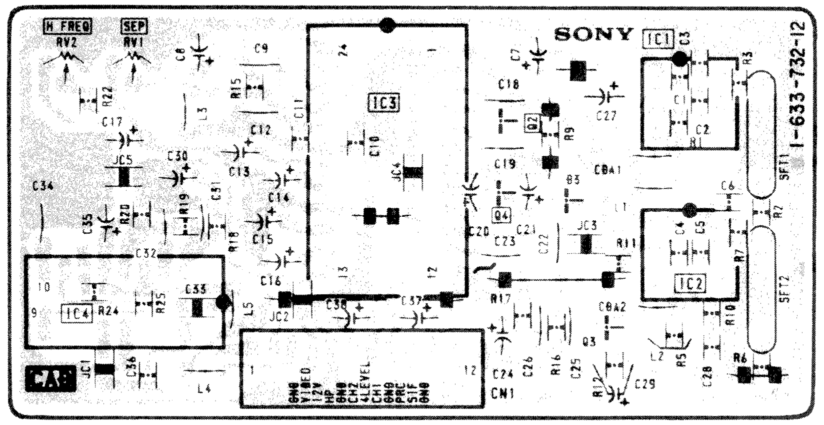


C [R·G·B OUT] **IFG** [SIF]

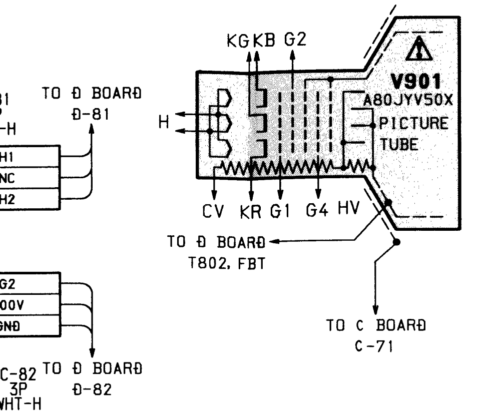
—C Board—


B-DRIVE
CNC73
CNC72
CNC82
CNC81
CNC71
J701
RV702
RV701
1-636-573-11
SONY

—SIF Board—

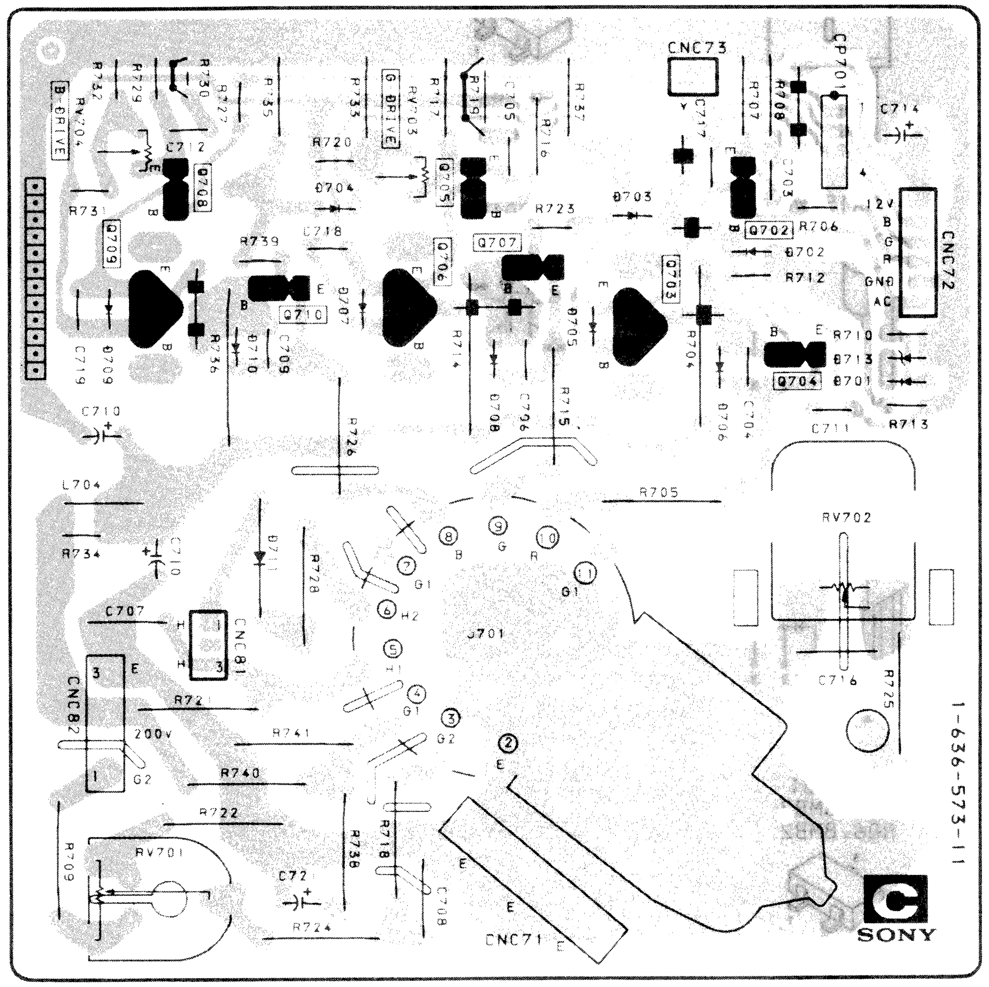

H FREQ
SEP
RV2
RV1
SONY
IC1
IC2
IC3
IC4
CN1
1-633-732-12

7	8	9

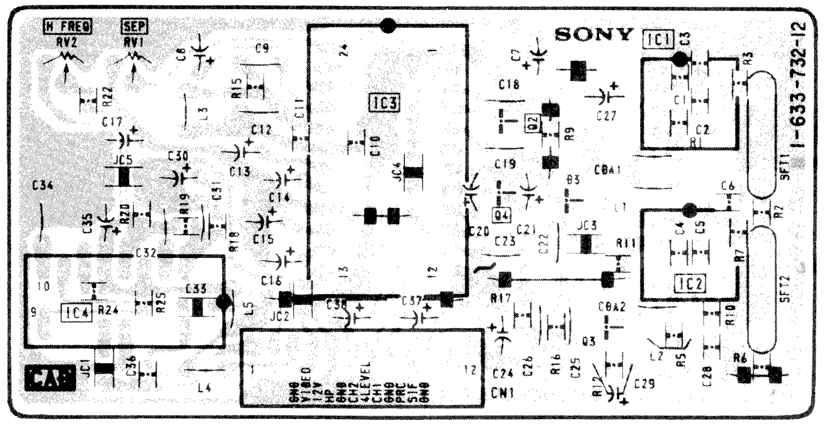

KG KB G2
V901
A80JYV50X
PICTURE TUBE
H
CV KR G1 G4 HV
TO Ð BOARD Ð-81
TO Ð BOARD T802, FBT
TO C BOARD C-71
TO Ð BOARD Ð-82
C-82 3P WHT-H
H1
NC
H2
G2
00V
GNÐ

C [R・G・B OUT] IFG [SIF]

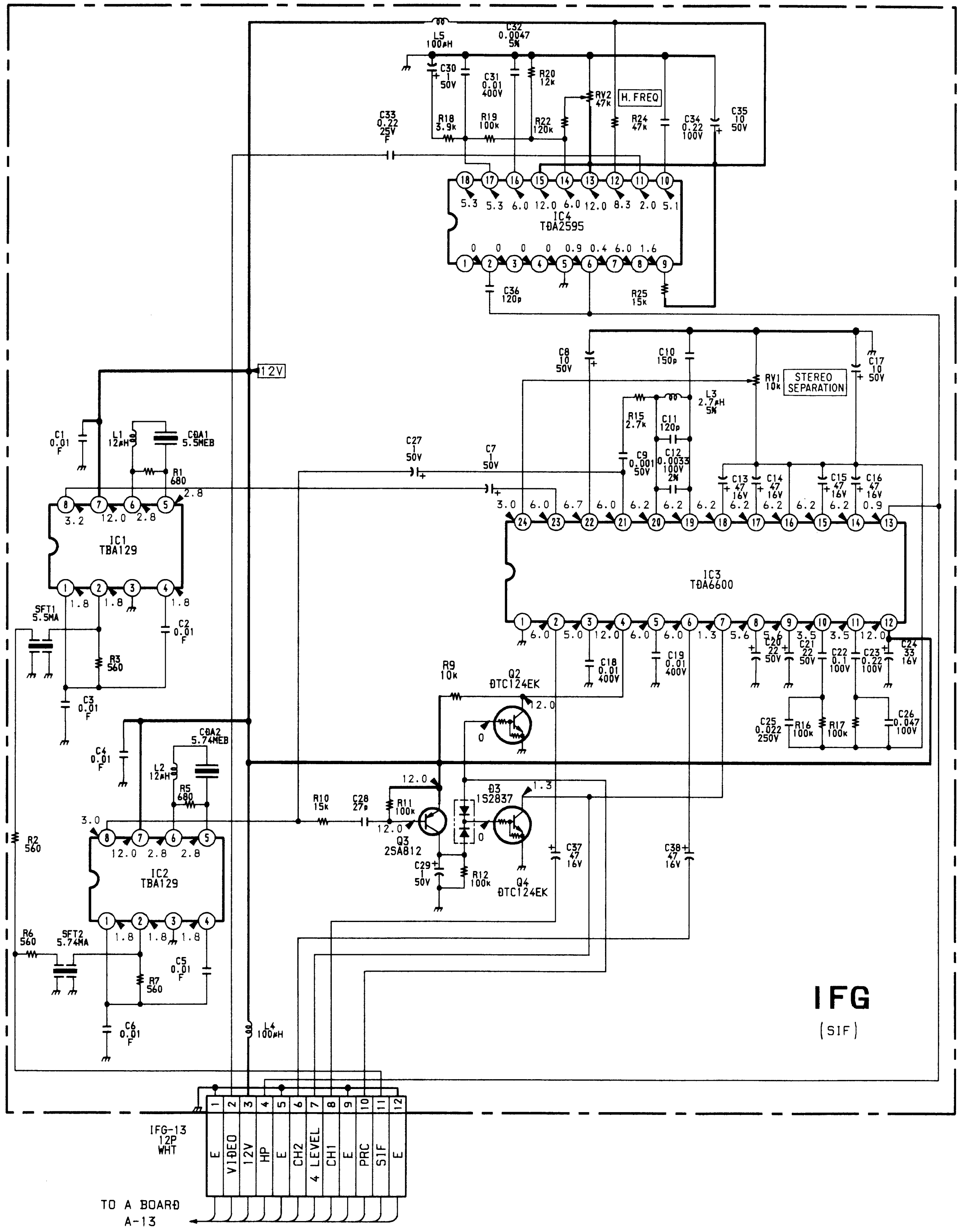
–C Board–


CNC73
CNC72
CNC71
CNC81
CNC82
CPP701
B DRIVE
G DRIVE
R DRIVE
Q702
Q703
Q704
Q705
Q706
Q707
Q708
Q709
Q710
RV701
RV702
RV704
RV705
V701
12V
B
G
R
GNÐ
AC
200V
G2
1-636-573-11
C
SONY

–SIF Board–

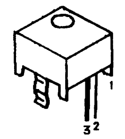

H FREQ
RV2
SEP
RV1
SONY
IC1
IC2
IC3
IC4
SFT1
SFT2
CN1
GNÐ
VIDEO
12V
HP
GNÐ
CH2
4LEVEL
CH1
GNÐ
PRC
SIF
GNÐ
1-633-732-12

SIF102 IFG5.5S

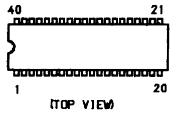

L5 100μH
C32 0.0047 5N
C30 1 50V
C31 0.01 400V
R20 12k
RV2 47k
H. FREQ
C33 0.22 25V F
R18 3.9k
R19 100k
R22 120k
R24 47k
C34 0.22 100V
C35 10 50V
IC4 TDA2595
C36 120p
R25 15k
12V
C1 0.01 F
L1 12μH
CBA1 5.5MEB
R1 680
C8 10 50V
C10 150p
C17 10 50V
RV1 10k
STEREO SEPARATION
L3 2.7μH 5N
R15 2.7k
C11 120p
C9 0.001 50V
C12 0.0033 100V 2N
C27 1 50V
C7 1 50V
C13 47 16V
C14 47 16V
C15 47 16V
C16 47 16V
IC1 TBA129
SFT1 5.5MA
R3 560
C2 0.01 F
C3 0.01 F
IC3 TDA6600
C18 0.01 400V
C19 0.01 400V
C20 22 50V
C21 22 50V
C22 0.1 100V
C23 0.22 100V
C24 33 16V
R9 10k
Q2 DTC124EK
C25 0.022 250V
R16 100k
R17 100k
C26 0.047 100V
C4 0.01 F
CBA2 5.74MEB
L2 12μH
R5 680
R10 15k
C28 27p
R11 100k
Q3 2SA812
D3 1S2837
Q4 DTC124EK
C29 1 50V
R12 100k
C37 47 16V
C38 47 16V
R2 560
IC2 TBA129
R6 560
SFT2 5.74MA
R7 560
C5 0.01 F
C6 0.01 F
L4 100μH
IFG (SIF)
IFG-13 12P WHT
E
VIDEO
12V
HP
E
CH2
4 LEVEL
CH1
E
PRC
SIF
E
TO A BOARD A-13

5-4. SEMICONDUCTORS

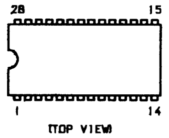
BX1387
SBX1483-11



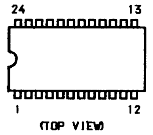
CCU2050-D343
DPU2553
MDA2062
PVPU2204
SAA5243P/E-M2
SDA20560-D343
SDA5243
SPU2243
VCU2133-60


40
21
1
20
(TOP VIEW)

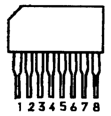
CXA1114P
SAA5231-V6
TDA4580-V4
TDA4650
TDA6200
TEA2028B
TMM2063P-70


28
15
1
14
(TOP VIEW)

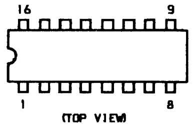
CXD1050A-09P


24
13
1
12
(TOP VIEW)

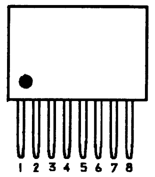
CX20061



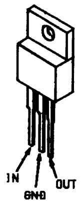
HCF4052BEY
MC14053BCP
PCF8574
TC4051BPHB
TC4052BPHB
TDA4660
TDA8442N3
TEA5114A


16
9
1
8
(TOP VIEW)

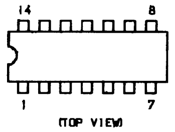
HIC2110



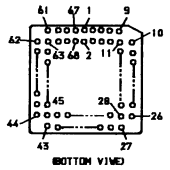
L78S05CV
RC7812FA



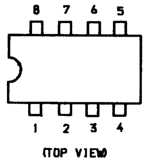
MCU2600-56


14
8
1
7
(TOP VIEW)

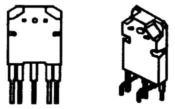
PIP2250


41
47
1
9
10
42
43
44
45
28
26
27
(BOTTOM VIEW)

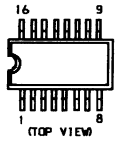
RC4558P
SDA2546
TDA2822M
TEA2014A
TEA2031A
µPC393C


8 7 6 5
1 2 3 4
(TOP VIEW)

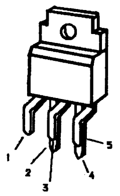
STR90120



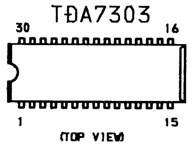
TC4053BPHB


16
9
1
8
(TOP VIEW)

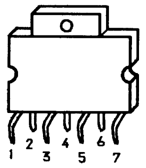
TDA2050



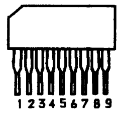
TDA7303


30
16
1
15
(TOP VIEW)

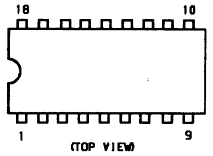
TDA8170



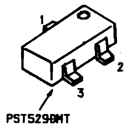
µPC4570HA-1



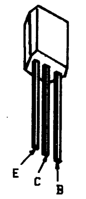
µPD41464C-15


18
10
1
9
(TOP VIEW)

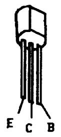
DTA144EK
DTC114EK
DTC124EK
DTC143TK
DTC144EK
2SA1037K-QR
2SA1162-G
2SB1295-UL6
2SC2412K-QR
2SC2712-G


1
2
3
PST529DMT

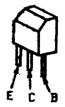
DTC114ES
DTC144ES



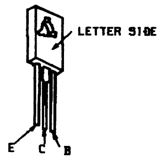
2SA733K
2SA1091-O



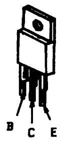
2SA1221-L
2SB734-34
2SC2958-L
2SD774-34



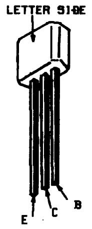
2SB772-Q
2SC2611
2SC2688-LK
2SD882-P


LETTER SIDE
E
C
B

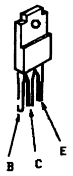
2SC2275A-P
2SC4159-E
2SD795A-P
2SD1585-K



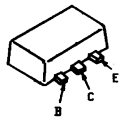
2SC2785-HFE


LETTER SIDE
E
C
B

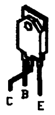
2SC3298B-O



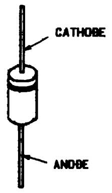
2SD1623-R



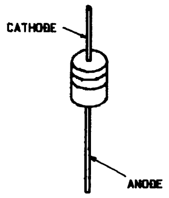
2SD1941-07



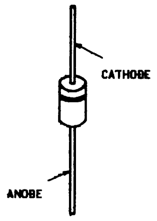
EGP20G
10E-2


CATHODE
ANODE

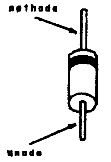
ERA83-006
RD10ES-B3
RD11ES-B3
RD13ES-B2
RD20ES-B3
RD33ES-B1
RD4.7ES-B2
RD5.1ES-B2
RD5.6ES-B2
RD5.6ES-B3
RD6.2ES-B2
RD6.8ES-B3
RD7.5ES-B2
RD7.5ES-B3
ED9.1ES-B3
1SS119


CATHODE
ANODE

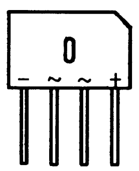
ERC06-15S
RU-3AM


CATHODE
ANODE

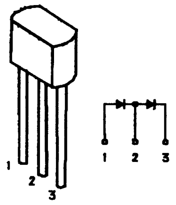
ERD29-08J


cathode
anode

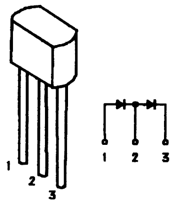
KBU4JL-6088



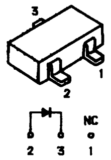
MA152WK



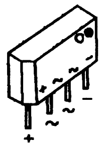
MC932



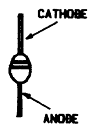
RD13MB1
RD5.6MB2
RD6.8MB2



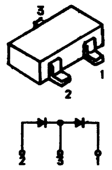
S1VB40



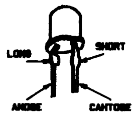
U05G
V11N


CATHODE
ANODE

1SS226



LD-201VR

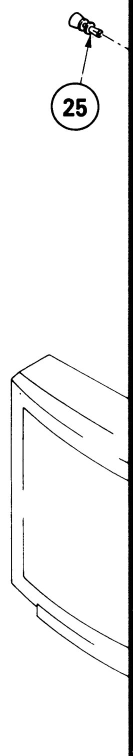

LONG
SHORT
ANODE
CATHODE

NOTE:

- Items with no
  cription are
  are seldom re
- The construct
  part are ind
  number in the
- Items marked
  they are se
  service. Some
  when ordering

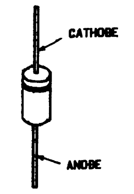
6-1. CHASSIS

● : BVTP3×12
○ : BVTP4×12
□ : BVTP4×20

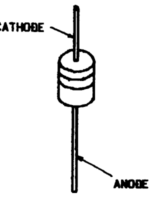


REF.NO.	PART NO.
1	*4-381-6
2	*4-374-9
3	*1-636-5
4	*1-636-5
5	4-386-6
6	*1-636-5
7	⚠.1-571-4
8	⚠.4-389-2
9	⚠.1-575-4
10	*1-636-5
11	*3-701-8
12	*A-1642-
13	⚠.1-439-4
14	*1-558-5
15	⚠1-563-2
16	⚠1-417-1

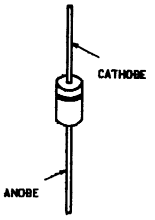
EGP20G
10E-2



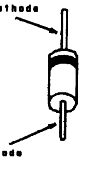
ERA83-006
RD10ES-B3
RD11ES-B3
RD13ES-B2
RD20ES-B3
RD33ES-B1
RD4.7ES-B2
RD5.1ES-B2
RD5.6ES-B2
RD5.6ES-B3
RD6.2ES-B2
RD6.8ES-B3
RD7.5ES-B2
RD7.5ES-B3
ED9.1ES-B3
1SS119



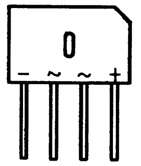
ERC06-15S
RU-3AM



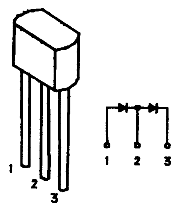
ERD29-08J



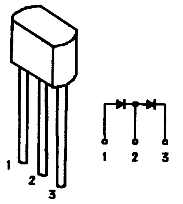
KBU4JL-6088



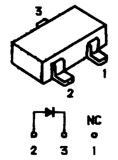
MA152WK



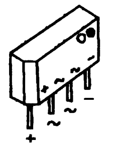
MC932



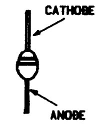
RD13MB1
RD5.6MB2
RD6.8MB2



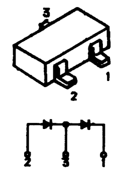
S1VB40



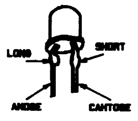
U05G
V11N



1SS226



LD-201VR



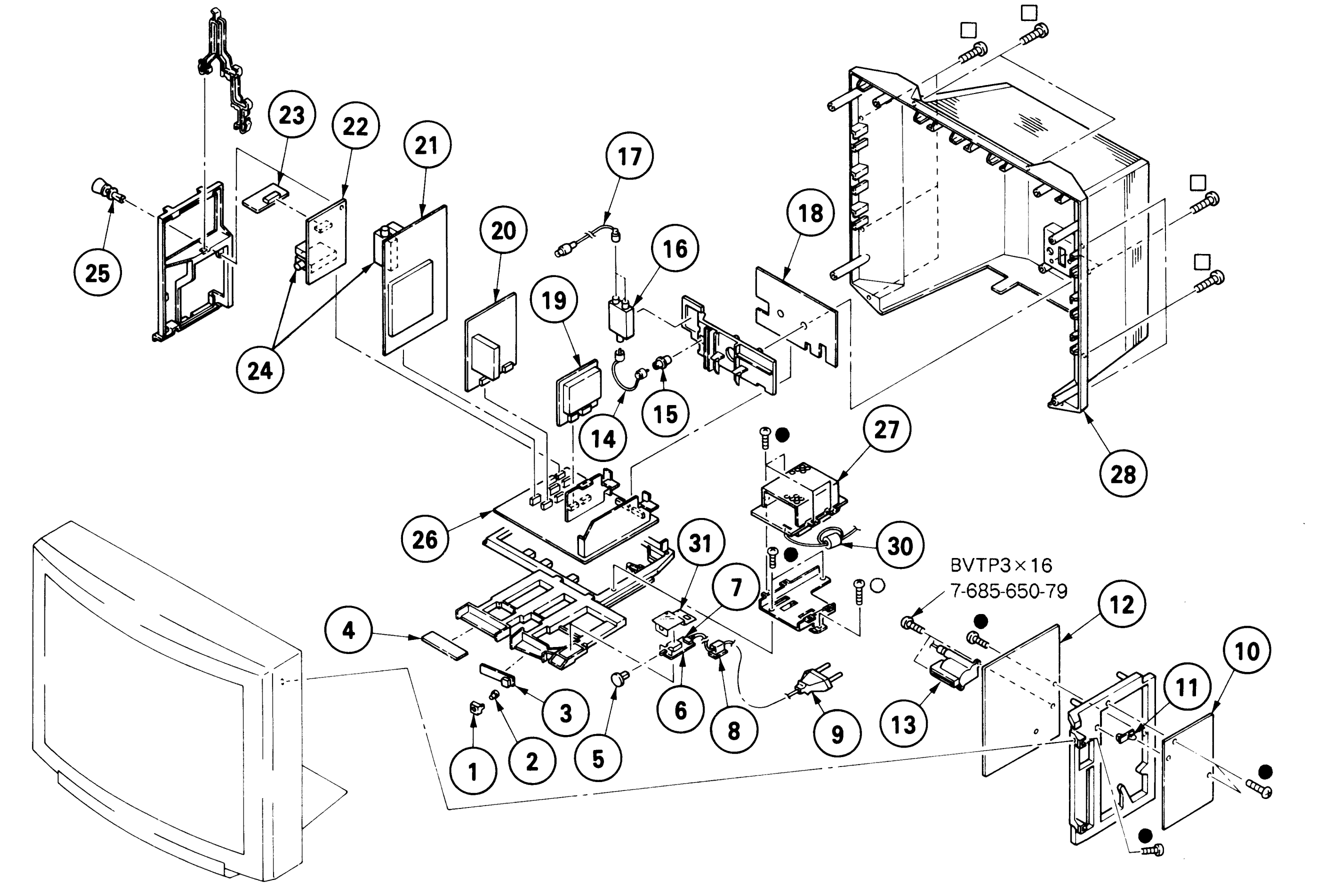
SECTION 6
EXPLODED VIEWS

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. CHASSIS

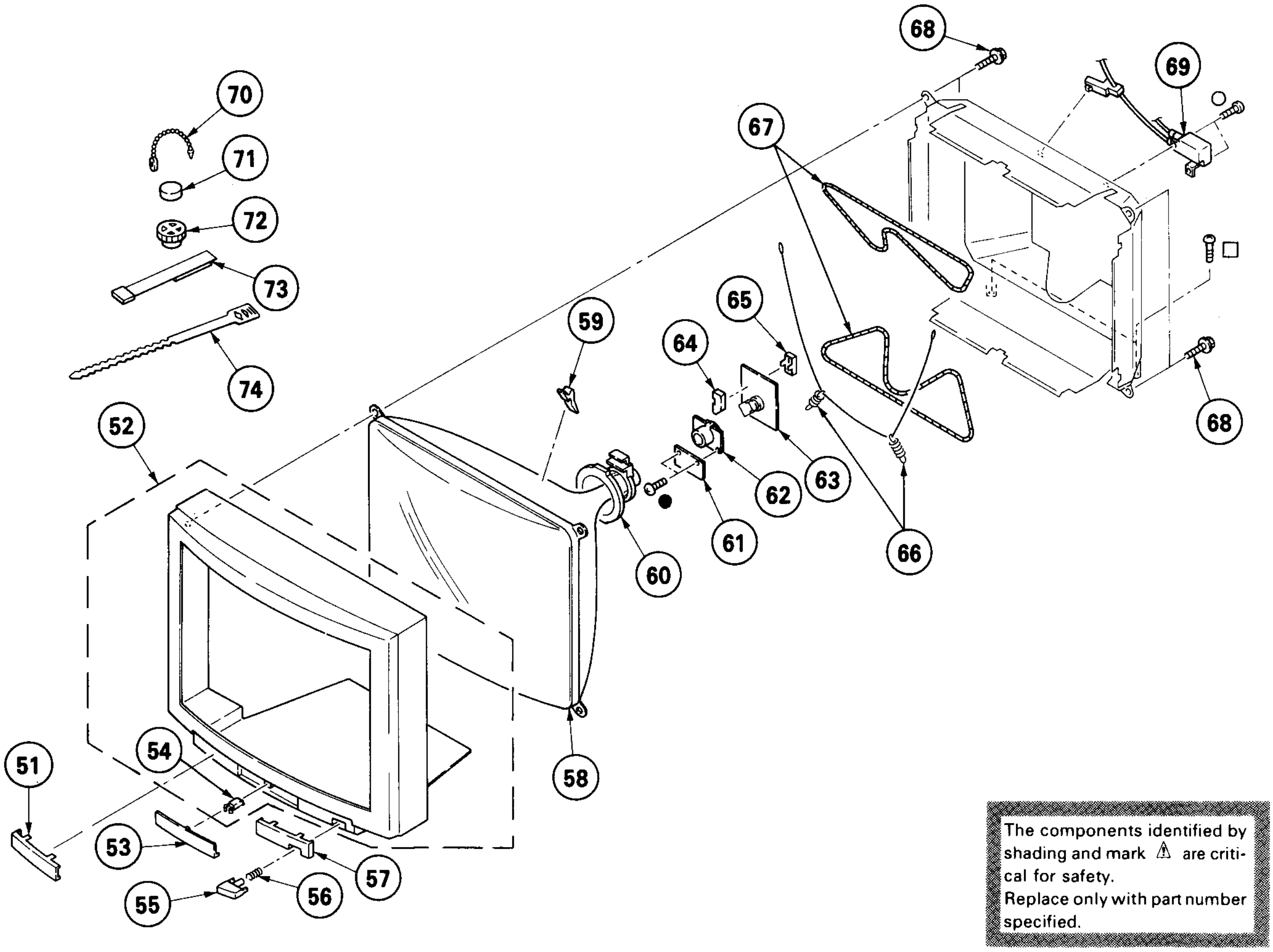
● : BVTP3×12 7-685-648-79
○ : BVTP4×12 7-685-661-14
□ : BVTP4×20 7-685-664-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	*4-381-686-01	BRACKET (B), LIGHT GUIDE	
2	*4-374-987-01	GUIDE, LIGHT	
3	*1-636-576-11	H2 BOARD	
4	*1-636-575-11	H1 BOARD	
5	4-386-611-01	COVER, SWITCH	
6	*1-636-574-11	F2 BOARD	
7	⚠.1-571-433-11	SWITCH, PUSH (AC POWER)	
8	⚠.4-389-201-02	HOLDER, AC CORD	
9	⚠.1-575-487-11	CORD, POWER (WITH NOISE FILTER)	
10	*1-636-582-11	F1 BOARD	
11	*3-701-832-00	HINGE, CIRCUIT BOARD	
12	*A-1642-025-A	D BOARD, COMPLETE	
13	⚠ 1-439-418-21	TRANSFORMER ASSY, FLYBACK (UX-1610)	
14	*1-558-539-21	CABLE, P-P	
15	⚠ 1-563-204-13	SOCKET, ANTENNA (PAL/SECAM)	
16	⚠ 1-417-175-12	RF SPLITTER	
17	1-590-127-11	CABLE, PIN	
18	*A-1651-013-A	J BOARD, COMPLETE	
19	*A-1645-009-A	V BOARD, COMPLETE	
20	*A-1621-009-A	B BOARD, COMPLETE	
21	*A-1623-001-A	P BOARD, COMPLETE	
22	*A-1632-015-A	A BOARD, COMPLETE	23
23	1-464-964-21	SIF BOARD (IF BLOCK IFG-5.5S)	
24	⚠ 1-465-301-11	TUNER, ET (UV-816(PLL))	
25	4-386-618-01	RIVET, T TYPE	
26	*A-1649-001-A	K BOARD, COMPLETE	
27	⚠ 1-413-583-11	G BOARD (ZD-113)	
28	X-4200-053-1	COVER ASSY, REAR	
30	1-543-619-11	CORE, RING	
31	4-200-274-21	COVER, POWER SWITCH	

6-2. PICTURE TUBE

● : BVTP3×12 7-685-648-79
○ : BVTP4×12 7-685-661-14
□ : BVTP4×20 7-685-664-79

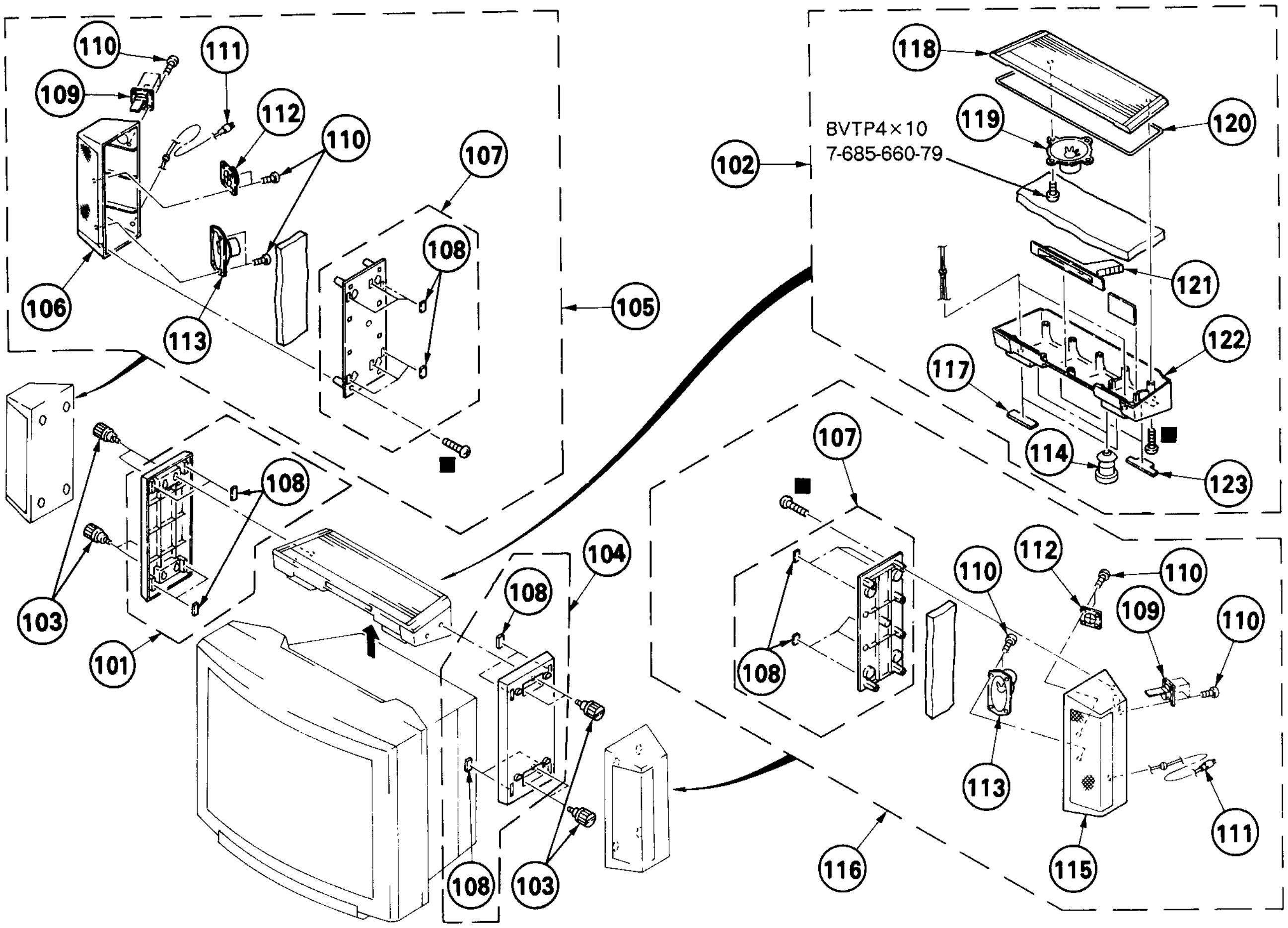


The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
51	4-200-435-01	PLATE, ORNAMENTAL	
52	X-4200-052-1	CABINET ASSY (WITH BEZEL ASSY)	54
53	4-200-445-01	DOOR	
54	4-392-036-01	CATCHER, PUSH	
55	4-200-444-01	BUTTON, POWER	
56	4-329-112-21	SPRING	
57	4-200-443-01	WINDOW, ORNAMENTAL	
58	⚠ 8-733-723-05	PICTURE TUBE (A80JYV50X)	
59	3-704-495-01	SPACER, DY	
60	⚠ 1-451-315-11	DEFLECTION YOKE (Y34FXA)	
61	*1-636-577-11	VM BOARD	
62	⚠ 1-452-468-11	NECK ASSY, PICTURE TUBE (NA321)	
63	*A-1638-010-A	C BOARD, COMPLETE	
64	*4-379-167-01	COVER (MAIN), CV	
65	*4-379-160-01	COVER (REAR LID), CV	
66	*4-376-036-01	SPRING, TENSION	
67	⚠ 1-426-433-21	COIL, DEMAGNETIZATION	
68	4-373-263-11	SCREW (M), PT	
69	⚠ 1-237-614-12	RESISTOR ASSY, HIGH-VOLTAGE	
70	4-308-870-00	CLIP, LEAD WIRE	
71	1-452-032-00	MAGNET, DISK; 10MM ϕ	
72	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
73	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
74	3-701-007-00	BAND, BINDING	

6-3. SPEAKER

■ : BVTP4×16 7-685-663-79


110
111
109
112
110
107
106
108
113
105
118
119
120
BVTP4×10
7-685-660-79
102
121
122
117
114
123
107
108
103
101
104
108
110
112
110
109
110
108
113
111
108
103
116
115

REF.NO.	PART NO.	DESCRIPTION	REMARK
101	X-4200-061-1	SPACER ASSY, SIDE(L)	108
102	A-1678-025-A	BOX COMPLETE ASSY, WOOFER	114, 117-123
103	X-4374-104-1	SCREW (B) ASSY, ORNAMENTAL	
104	X-4200-060-1	SPACER ASSY, SIDE(R)	108
105	*A-1678-024-A	BOX ASSY (LEFT), SPEAKER	106-113
106	X-4200-057-1	BOX ASSY, SIDE (L)	
107	X-4200-056-1	BOTTOM ASSY, SIDE	108
108	4-200-006-11	CUSHION, FOOT	
109	1-236-510-21	NETWORK, DIVIDING	
110	4-364-802-00	SCREW (3.5X13)	
111	1-575-024-11	CORD, SPEAKER (WITH PLUG)	
112	1-544-203-11	SPEAKER	
113	1-544-204-11	SPEAKER	
114	1-236-960-11	NETWORK, DIVIDING	
115	X-4200-054-1	BOX ASSY, SIDE (R)	
116	*A-1678-023-A	BOX ASSY (RIGHT), SPEAKER	107-113, 115
117	4-200-473-01	CUSHION, FOOT (B)	
118	4-200-469-01	BOARD, BAFFLE, WOOFER	
119	1-544-192-11	SPEAKER	
120	4-200-471-01	GASKET	
121	*4-200-470-01	TUBE, BASS REFLEX	
122	X-4200-059-1	BOX ASSY, WOOFER	
123	4-200-472-01	CUSHION, FOOT (A)	

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1621-009-A	B BOARD, COMPLETE *****************			
	*1-508-784-00	PIN, CONNECTOR (5MM PITCH 1P)			
	*1-564-518-11	PLUG, CONNECTOR 3P			
	*1-564-521-11	PLUG, CONNECTOR 6P			
	*1-565-393-11	CONNECTOR, BOARD TO BOARD			
		<CAPACITOR>			
C301	1-106-228-00	MYLAR	0.22MF	10%	100V
C302	1-106-228-00	MYLAR	0.22MF	10%	100V
C303	1-124-122-11	ELECT	100MF	20%	50V
C304	1-106-228-00	MYLAR	0.22MF	10%	100V
C305	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C306	1-124-902-00	ELECT	0.47MF	20%	50V
C307	1-124-902-00	ELECT	0.47MF	20%	50V
C308	1-124-902-00	ELECT	0.47MF	20%	50V
C309	1-124-902-00	ELECT	0.47MF	20%	50V
C310	1-106-220-00	MYLAR	0.1MF	10%	100V
C311	1-106-220-00	MYLAR	0.1MF	10%	100V
C312	1-124-902-00	ELECT	0.47MF	20%	50V
C313	1-124-902-00	ELECT	0.47MF	20%	50V
C314	1-124-902-00	ELECT	0.47MF	20%	50V
C315	1-124-791-11	ELECT	1MF	20%	50V
C316	1-124-927-11	ELECT	4.7MF	20%	50V
C317	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C318	1-124-927-11	ELECT	4.7MF	20%	50V
C319	1-124-927-11	ELECT	4.7MF	20%	50V
C320	1-124-910-11	ELECT	47MF	20%	50V
C321	1-124-791-11	ELECT	1MF	20%	50V
C322	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C323	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C324	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C325	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C326	1-124-910-11	ELECT	47MF	20%	50V
C327	1-124-910-11	ELECT	47MF	20%	50V
C328	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C329	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C330	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C331	1-106-220-00	MYLAR	0.1MF	10%	100V
C332	1-106-220-00	MYLAR	0.1MF	10%	100V
C333	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C334	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C335	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C336	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C337	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C338	1-106-375-12	MYLAR	0.022MF	10%	250V
C339	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C340	1-126-103-11	ELECT	470MF	20%	16V
C341	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C342	1-124-791-11	ELECT	1MF	20%	50V
C343	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C344	1-124-791-11	ELECT	1MF	20%	50V
C345	1-106-383-00	MYLAR	0.047MF	10%	100V
C346	1-130-783-00	MYLAR	0.33MF	10%	100V
C347	1-106-220-00	MYLAR	0.1MF	10%	100V
C348	1-106-375-12	MYLAR	0.022MF	10%	250V
C349	1-106-375-12	MYLAR	0.022MF	10%	250V
C350	1-124-927-11	ELECT	4.7MF	20%	50V
C351	1-106-375-12	MYLAR	0.022MF	10%	250V
C352	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C353	1-126-101-11	ELECT	100MF	20%	16V
C354	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C356	1-126-101-11	ELECT	100MF	20%	16V
C357	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C358	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C359	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C360	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C361	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C363	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C365	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C367	1-102-963-00	CERAMIC	33PF	5%	50V
C370	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C371	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C372	1-124-477-11	ELECT	47MF	20%	16V
C373	1-124-477-11	ELECT	47MF	20%	16V
C374	1-163-090-00	CERAMIC CHIP	7PF	0.25PF	50V
C375	1-163-090-00	CERAMIC CHIP	7PF	0.25PF	50V
C376	1-124-963-11	ELECT	33MF	20%	16V
C377	1-124-119-00	ELECT	330MF	20%	16V
C378	1-124-963-11	ELECT	33MF	20%	16V
C379	1-163-090-00	CERAMIC CHIP	7PF	0.25PF	50V
C380	1-163-090-00	CERAMIC CHIP	7PF	0.25PF	50V
C381	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C382	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C383	1-163-197-00	CERAMIC CHIP	470PF	5%	50V
C384	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C385	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C386	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C387	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C388	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C389	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C1301	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C1302	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
		<TRIMMER>			
CT301	1-141-392-11	CAP, VAR, TRIMMER (1 GANG)			
CT302	1-141-392-11	CAP, VAR, TRIMMER (1 GANG)			

B

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D301	8-719-911-19	DIODE 1SS119	
D302	8-719-911-19	DIODE 1SS119	
D303	8-719-911-19	DIODE 1SS119	
D304	8-719-911-19	DIODE 1SS119	
D305	8-719-911-19	DIODE 1SS119	
D306	8-719-980-78	DIODE ERA83-006	
D307	8-719-110-23	DIODE RD11ES-B3	
D309	8-719-911-19	DIODE 1SS119	
D310	8-719-110-23	DIODE RD11ES-B3	
D311	8-719-110-23	DIODE RD11ES-B3	
D312	8-719-110-23	DIODE RD11ES-B3	
D313	8-719-911-19	DIODE 1SS119	
D314	8-719-911-19	DIODE 1SS119	
D315	8-719-911-19	DIODE 1SS119	
D316	8-719-911-19	DIODE 1SS119	
D317	8-719-911-19	DIODE 1SS119	
D318	8-719-911-19	DIODE 1SS119	
D319	8-719-911-19	DIODE 1SS119	
D320	8-719-911-19	DIODE 1SS119	
D321	8-719-109-90	DIODE RD5.6ES-B3	
D322	8-719-911-19	DIODE 1SS119	
D323	8-719-911-19	DIODE 1SS119	
D324	8-719-800-76	DIODE 1SS226	
D325	8-719-800-76	DIODE 1SS226	
D326	8-719-800-76	DIODE 1SS226	
D327	8-719-911-19	DIODE 1SS119	
D329	8-719-109-62	DIODE RD3.0ES-B1	
D330	8-719-911-19	DIODE 1SS119	
D331	8-719-911-19	DIODE 1SS119	
D332	8-719-911-19	DIODE 1SS119	
D333	8-719-911-19	DIODE 1SS119	
D334	8-719-911-19	DIODE 1SS119	
D335	8-719-911-19	DIODE 1SS119	
D336	8-719-911-19	DIODE 1SS119	
D337	8-719-911-19	DIODE 1SS119	
D338	8-719-911-19	DIODE 1SS119	
D339	8-719-911-19	DIODE 1SS119	

<DELAY LINE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
DL301	1-415-613-11	DELAY LINE, Y	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC301	8-759-503-41	IC TDA4580-V6	
IC302	8-759-980-60	IC TDA8442N3	
IC303	8-759-990-30	IC TDA4660	
IC304	8-759-990-29	IC TDA4650	
IC306	8-759-501-49	IC HCF4052BEY	
IC308	8-752-006-12	IC CX20061	
IC1301	1-235-534-11	CONTROL MODULE, PICTURE	
IC1312	8-741-650-21	IC SBX1650-21	

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L301	1-410-868-11	INDUCTOR	4.7UH	
L303	1-404-554-11	COIL		
L304	1-410-868-11	INDUCTOR	4.7UH	
L305	1-408-402-00	INDUCTOR	2.7UH	
L306	1-410-868-11	INDUCTOR	4.7UH	
L308	1-404-495-00	COIL		
L309	1-408-415-00	INDUCTOR	33UH	
L310	1-408-419-00	INDUCTOR	68UH	
L312	1-404-495-00	COIL		
L313	1-404-554-11	COIL		
L314	1-408-409-00	INDUCTOR	10UH	
L315	1-410-868-11	INDUCTOR	4.7UH	
L316	1-408-397-00	INDUCTOR	1UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q301	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q302	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q303	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q304	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q305	8-729-901-06	TRANSISTOR DTA144EK	
Q306	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q307	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q308	8-729-901-00	TRANSISTOR DTC124EK	
Q309	8-729-901-00	TRANSISTOR DTC124EK	
Q310	8-729-901-00	TRANSISTOR DTC124EK	
Q311	8-729-901-00	TRANSISTOR DTC124EK	
Q312	8-729-216-22	TRANSISTOR 2SA1162-G	
Q313	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q320	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q321	8-729-920-71	TRANSISTOR 2SA1037K-QR	
Q322	8-729-216-22	TRANSISTOR 2SA1162-G	
Q323	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q324	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q327	8-729-216-22	TRANSISTOR 2SA1162-G	
Q328	8-729-216-22	TRANSISTOR 2SA1162-G	
Q329	8-729-216-22	TRANSISTOR 2SA1162-G	
Q330	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q331	8-729-216-22	TRANSISTOR 2SA1162-G	
Q332	8-729-216-22	TRANSISTOR 2SA1162-G	
Q333	8-729-901-00	TRANSISTOR DTC124EK	
Q334	8-729-901-00	TRANSISTOR DTC124EK	
Q335	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q336	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q337	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q338	8-729-216-22	TRANSISTOR 2SA1162-G	
Q339	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q340	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q341	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q342	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q343	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q344	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q345	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q346	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q347	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q348	8-729-901-00	TRANSISTOR DTC124EK	
Q1302	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1303	8-729-920-74	TRANSISTOR 2SC2412K-QR	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R301	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R302	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R303	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R304	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R305	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R306	1-216-184-00	METAL GLAZE	270	5%	1/8W	
R307	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R308	1-216-184-00	METAL GLAZE	270	5%	1/8W	
R309	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R310	1-216-025-00	METAL GLAZE	100	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R311	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R312	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R313	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R314	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R315	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R316	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R317	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R320	1-216-198-00	METAL GLAZE	1K	5%	1/8W	
R321	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R322	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R323	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R324	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R325	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R326	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R327	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R328	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R329	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R330	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R331	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R332	1-216-182-00	METAL GLAZE	220	5%	1/8W	
R333	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R334	1-249-422-11	CARBON	2.7K	5%	1/4W	
R335	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R336	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R337	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R338	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R339	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R340	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R341	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R342	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R343	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R344	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R345	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R346	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R347	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R348	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R349	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R350	1-216-184-00	METAL GLAZE	270	5%	1/8W	
R351	1-216-184-00	METAL GLAZE	270	5%	1/8W	
R352	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R353	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R354	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R355	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R356	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R357	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R358	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R359	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R360	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R361	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R362	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R363	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R364	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R365	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R366	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R367	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R368	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R369	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R370	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R371	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R372	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R373	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R374	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R375	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R376	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R377	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R378	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R379	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R380	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R381	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R382	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R383	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R384	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R385	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R386	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R387	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R388	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W	
R389	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R390	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R391	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R392	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R393	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R394	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R395	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R396	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R397	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R398	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R399	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R400	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W	
R401	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R402	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R403	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R404	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W	
R405	1-216-208-00	METAL GLAZE	2.7K	5%	1/8W	
R406	1-216-748-11	METAL GLAZE	39K	5%	1/10W	
R407	1-216-748-11	METAL GLAZE	39K	5%	1/10W	
R408	1-216-748-11	METAL GLAZE	39K	5%	1/10W	
R409	1-216-748-11	METAL GLAZE	39K	5%	1/10W	
R410	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W	
R411	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R412	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R413	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R414	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R415	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R416	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R417	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R418	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R419	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R420	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R421	1-216-208-00	METAL GLAZE	2.7K	5%	1/8W	
R422	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R423	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R424	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R425	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R426	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R427	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R428	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R429	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R430	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R431	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R432	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R434	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R435	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1301	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1302	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1303	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1304	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1305	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	

B **P**

REF.NO.	PART NO.	DESCRIPTION			REMARK
R1306	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1307	1-249-428-11	CARBON	8.2K	5%	1/4W

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION
RV301	1-238-012-11	RES, ADJ, CARBON 1K

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION
X301	1-567-307-11	OSCILLATOR, CRYSTAL
X302	1-567-131-00	OSCILLATOR, CRYSTAL

`*************************************************************`

*A-1623-001-A P BOARD, COMPLETE
`*****************`

*1-560-125-00 PLUG, CONNECTOR (2.5MM) 5P
*1-565-393-11 CONNECTOR, BOARD TO BOARD

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C2001	1-101-005-00	CERAMIC	0.022MF		50V
C2002	1-124-927-11	ELECT	4.7MF	20%	50V
C2003	1-101-880-00	CERAMIC	47PF	5%	50V
C2005	1-124-925-11	ELECT	2.2MF	20%	50V
C2007	1-130-834-00	MYLAR	1MF	10%	63V
C2008	1-130-834-00	MYLAR	1MF	10%	63V
C2009	1-130-834-00	MYLAR	1MF	10%	63V
C2011	1-101-880-00	CERAMIC	47PF	5%	50V
C2012	1-101-880-00	CERAMIC	47PF	5%	50V
C2013	1-124-925-11	ELECT	2.2MF	20%	50V
C2015	1-124-122-11	ELECT	100MF	20%	50V
C2016	1-106-220-00	MYLAR	0.1MF	10%	100V
C2017	1-106-220-00	MYLAR	0.1MF	10%	100V
C2018	1-106-220-00	MYLAR	0.1MF	10%	100V
C2022	1-124-122-11	ELECT	100MF	20%	50V
C2023	1-124-902-00	ELECT	0.47MF	20%	50V
C2024	1-124-902-00	ELECT	0.47MF	20%	50V
C2025	1-101-004-00	CERAMIC	0.01MF		50V
C2026	1-101-004-00	CERAMIC	0.01MF		50V
C2027	1-124-911-95	ELECT	220MF	20%	50V
C2028	1-101-004-00	CERAMIC	0.01MF		50V
C2029	1-123-875-11	ELECT	10MF	20%	50V
C2030	1-101-880-00	CERAMIC	47PF	5%	50V
C2031	1-101-880-00	CERAMIC	47PF	5%	50V
C2032	1-124-927-11	ELECT	4.7MF	20%	50V
C2037	1-102-978-00	CERAMIC	220PF	5%	50V
C2038	1-124-902-00	ELECT	0.47MF	20%	50V
C2039	1-124-902-00	ELECT	0.47MF	20%	50V
C2040	1-123-875-11	ELECT	10MF	20%	50V
C2041	1-124-122-11	ELECT	100MF	20%	50V
C2101	1-126-233-11	ELECT	22MF	20%	50V
C2102	1-126-103-11	ELECT	470MF	20%	16V
C2104	1-124-910-11	ELECT	47MF	20%	50V
C2106	1-126-233-11	ELECT	22MF	20%	50V
C2108	1-136-165-00	FILM	0.1MF	5%	50V
C2115	1-124-791-11	ELECT	1MF	20%	50V
C2127	1-124-122-11	ELECT	100MF	20%	50V
C2128	1-124-910-11	ELECT	47MF	20%	50V
C2202	1-101-005-00	CERAMIC	0.022MF		50V
C2203	1-101-005-00	CERAMIC	0.022MF		50V
C2204	1-101-005-00	CERAMIC	0.022MF		50V
C2205	1-126-233-11	ELECT	22MF	20%	50V
C2207	1-101-004-00	CERAMIC	0.01MF		50V
C2209	1-101-004-00	CERAMIC	0.01MF		50V
C2210	1-101-005-00	CERAMIC	0.022MF		50V
C2211	1-102-936-00	CERAMIC	3PF	0.25PF	50V
C2212	1-101-005-00	CERAMIC	0.022MF		50V
C2213	1-101-005-00	CERAMIC	0.022MF		50V
C2214	1-101-005-00	CERAMIC	0.022MF		50V
C2215	1-101-005-00	CERAMIC	0.022MF		50V
C2217	1-101-005-00	CERAMIC	0.022MF		50V
C2218	1-101-005-00	CERAMIC	0.022MF		50V
C2219	1-124-122-11	ELECT	100MF	20%	50V
C2220	1-101-005-00	CERAMIC	0.022MF		50V
C2221	1-124-122-11	ELECT	100MF	20%	50V
C2222	1-101-005-00	CERAMIC	0.022MF		50V
C2223	1-124-925-11	ELECT	2.2MF	20%	50V
C2224	1-101-005-00	CERAMIC	0.022MF		50V
C2225	1-101-005-00	CERAMIC	0.022MF		50V
C2226	1-101-005-00	CERAMIC	0.022MF		50V
C2227	1-124-122-11	ELECT	100MF	20%	50V
C2228	1-101-005-00	CERAMIC	0.022MF		50V

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D2001	8-719-911-19	DIODE 1SS119
D2002	8-719-109-85	DIODE RD5.1ES-B2
D2003	8-719-109-85	DIODE RD5.1ES-B2
D2004	8-719-109-85	DIODE RD5.1ES-B2
D2005	8-719-109-85	DIODE RD5.1ES-B2
D2006	8-719-911-19	DIODE 1SS119
D2007	8-719-911-19	DIODE 1SS119
D2202	8-719-911-19	DIODE 1SS119
D2203	8-719-911-19	DIODE 1SS119
D2204	8-719-110-03	DIODE RD7.5ES-B2
D2205	8-719-911-19	DIODE 1SS119

<FILTER>

REF.NO.	PART NO.	DESCRIPTION
FL2001	1-236-129-11	ENCAPSULATED COMPONENT
FL2002	1-236-129-11	ENCAPSULATED COMPONENT
FL2003	1-236-129-11	ENCAPSULATED COMPONENT
FL2004	1-236-129-11	ENCAPSULATED COMPONENT
FL2005	1-236-129-11	ENCAPSULATED COMPONENT
FL2006	1-236-129-11	ENCAPSULATED COMPONENT
FL2007	1-236-129-11	ENCAPSULATED COMPONENT
FL2008	1-236-129-11	ENCAPSULATED COMPONENT
FL2009	1-236-129-11	ENCAPSULATED COMPONENT
FL2010	1-236-129-11	ENCAPSULATED COMPONENT
FL2011	1-236-129-11	ENCAPSULATED COMPONENT
FL2012	1-236-129-11	ENCAPSULATED COMPONENT
FL2013	1-236-129-11	ENCAPSULATED COMPONENT
FL2015	1-236-129-11	ENCAPSULATED COMPONENT
FL2016	1-236-129-11	ENCAPSULATED COMPONENT
FL2017	1-236-129-11	ENCAPSULATED COMPONENT
FL2018	1-236-129-11	ENCAPSULATED COMPONENT

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC2001	8-752-332-82	IC CXD1050A-09P
IC2103	8-759-979-62	IC PCF8574
IC2201	8-759-502-25	IC PIP2250
	*1-540-123-11	SOCKET, IC 68P; IC2201
IC2202	8-759-502-28	IC CCU2050-D343
IC2203	8-759-725-18	IC PVPU2204
IC2204	8-759-502-26	IC SPU2243

REF.NO.	PART NO.	DESCRIPTION				REMARK
IC2205	8-759-502-27	IC DPU2553				
IC2206	8-759-997-99	IC VCU2133-60				
IC2207	8-759-105-98	IC UPD41464C-15				
IC2208	8-759-105-98	IC UPD41464C-15				
IC2209	8-759-720-22	IC MDA2062				
IC2210	8-759-720-22	IC MDA2062				
IC2211	8-759-502-24	IC MCU2600-56				
IC2212	8-759-998-02	IC TEA5114A				
		<COIL>				
L2002	1-408-414-00	INDUCTOR	27UH			
L2100	1-410-116-11	INDUCTOR	0.56MMH			
L2101	1-408-403-00	INDUCTOR	3.3UH			
L2102	1-408-413-00	INDUCTOR	22UH			
L2107	1-408-397-00	INDUCTOR	1UH			
		<TRANSISTOR>				
Q2001	8-729-900-89	TRANSISTOR DTC144ES				
Q2005	8-729-173-38	TRANSISTOR 2SA733-K				
Q2006	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2007	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2008	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2009	8-729-173-38	TRANSISTOR 2SA733-K				
Q2010	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2011	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2012	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2013	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2014	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2015	8-729-173-38	TRANSISTOR 2SA733-K				
Q2016	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2017	8-729-173-38	TRANSISTOR 2SA733-K				
Q2018	8-729-173-38	TRANSISTOR 2SA733-K				
Q2113	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2114	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2125	8-729-900-89	TRANSISTOR DTC144ES				
Q2126	8-729-900-65	TRANSISTOR DTA144ES				
Q2127	8-729-900-89	TRANSISTOR DTC144ES				
Q2201	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2202	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2203	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q2204	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R2002	1-249-413-11	CARBON	470	5%	1/4W	
R2003	1-249-413-11	CARBON	470	5%	1/4W	
R2004	1-249-413-11	CARBON	470	5%	1/4W	
R2005	1-249-419-11	CARBON	1.5K	5%	1/4W	
R2006	1-249-419-11	CARBON	1.5K	5%	1/4W	
R2007	1-249-419-11	CARBON	1.5K	5%	1/4W	
R2010	1-249-411-11	CARBON	330	5%	1/4W	
R2014	1-249-417-11	CARBON	1K	5%	1/4W	
R2015	1-249-437-11	CARBON	47K	5%	1/4W	
R2016	1-249-439-11	CARBON	68K	5%	1/4W	
R2017	1-249-417-11	CARBON	1K	5%	1/4W	
R2018	1-249-405-11	CARBON	100	5%	1/4W	
R2019	1-249-417-11	CARBON	1K	5%	1/4W	
R2020	1-249-433-11	CARBON	22K	5%	1/4W	
R2021	1-249-429-11	CARBON	10K	5%	1/4W	
R2024	1-249-417-11	CARBON	1K	5%	1/4W	
R2025	1-249-433-11	CARBON	22K	5%	1/4W	
R2026	1-249-421-11	CARBON	2.2K	5%	1/4W	
R2027	1-249-433-11	CARBON	22K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2030	1-249-417-11	CARBON	1K	5%	1/4W	
R2031	1-249-437-11	CARBON	47K	5%	1/4W	
R2032	1-249-439-11	CARBON	68K	5%	1/4W	
R2033	1-249-417-11	CARBON	1K	5%	1/4W	
R2034	1-249-405-11	CARBON	100	5%	1/4W	
R2035	1-249-421-11	CARBON	2.2K	5%	1/4W	
R2036	1-249-402-11	CARBON	56	5%	1/4W	
R2037	1-249-402-11	CARBON	56	5%	1/4W	
R2038	1-249-402-11	CARBON	56	5%	1/4W	
R2039	1-249-397-11	CARBON	22	5%	1/4W	
R2040	1-249-397-11	CARBON	22	5%	1/4W	
R2041	1-249-397-11	CARBON	22	5%	1/4W	
R2046	1-249-411-11	CARBON	330	5%	1/4W	
R2047	1-249-439-11	CARBON	68K	5%	1/4W	
R2048	1-249-411-11	CARBON	330	5%	1/4W	
R2049	1-249-439-11	CARBON	68K	5%	1/4W	
R2050	1-249-436-11	CARBON	39K	5%	1/4W	
R2051	1-249-417-11	CARBON	1K	5%	1/4W	
R2052	1-249-436-11	CARBON	39K	5%	1/4W	
R2053	1-249-417-11	CARBON	1K	5%	1/4W	
R2054	1-249-417-11	CARBON	1K	5%	1/4W	
R2055	1-249-417-11	CARBON	1K	5%	1/4W	
R2056	1-249-417-11	CARBON	1K	5%	1/4W	
R2057	1-249-417-11	CARBON	1K	5%	1/4W	
R2058	1-249-405-11	CARBON	100	5%	1/4W	
R2059	1-249-405-11	CARBON	100	5%	1/4W	
R2060	1-249-429-11	CARBON	10K	5%	1/4W	
R2061	1-249-429-11	CARBON	10K	5%	1/4W	
R2063	1-249-405-11	CARBON	100	5%	1/4W	
R2064	1-249-405-11	CARBON	100	5%	1/4W	
R2065	1-249-405-11	CARBON	100	5%	1/4W	
R2066	1-249-405-11	CARBON	100	5%	1/4W	
R2067	1-249-405-11	CARBON	100	5%	1/4W	
R2068	1-249-405-11	CARBON	100	5%	1/4W	
R2072	1-249-405-11	CARBON	100	5%	1/4W	
R2073	1-249-413-11	CARBON	470	5%	1/4W	
R2074	1-249-413-11	CARBON	470	5%	1/4W	
R2075	1-249-405-11	CARBON	100	5%	1/4W	
R2076	1-249-433-11	CARBON	22K	5%	1/4W	
R2077	1-249-433-11	CARBON	22K	5%	1/4W	
R2078	1-249-417-11	CARBON	1K	5%	1/4W	
R2079	1-249-414-11	CARBON	560	5%	1/4W	
R2080	1-249-413-11	CARBON	470	5%	1/4W	
R2081	1-249-425-11	CARBON	4.7K	5%	1/4W	
R2082	1-249-417-11	CARBON	1K	5%	1/4W	
R2083	1-249-413-11	CARBON	470	5%	1/4W	
R2085	1-249-434-11	CARBON	27K	5%	1/4W	
R2086	1-249-440-11	CARBON	82K	5%	1/4W	
R2087	1-249-411-11	CARBON	330	5%	1/4W	
R2089	1-249-434-11	CARBON	27K	5%	1/4W	
R2090	1-249-440-11	CARBON	82K	5%	1/4W	
R2091	1-249-411-11	CARBON	330	5%	1/4W	
R2092	1-249-425-11	CARBON	4.7K	5%	1/4W	
R2093	1-249-425-11	CARBON	4.7K	5%	1/4W	
R2094	1-249-424-11	CARBON	3.9K	5%	1/4W	
R2095	1-249-424-11	CARBON	3.9K	5%	1/4W	
R2105	1-249-432-11	CARBON	18K	5%	1/4W	
R2107	1-249-433-11	CARBON	22K	5%	1/4W	
R2108	1-249-432-11	CARBON	18K	5%	1/4W	
R2110	1-249-429-11	CARBON	10K	5%	1/4W	
R2111	1-249-422-11	CARBON	2.7K	5%	1/4W	
R2116	1-249-404-00	CARBON	82	5%	1/4W	
R2118	1-249-435-11	CARBON	33K	5%	1/4W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

P **F1**

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2128	1-249-406-11	CARBON	120	5%	1/4W	
R2129	1-249-421-11	CARBON	2.2K	5%	1/4W	
R2131	1-249-437-11	CARBON	47K	5%	1/4W	
R2158	1-249-405-11	CARBON	100	5%	1/4W	
R2159	1-249-405-11	CARBON	100	5%	1/4W	
R2162	1-249-440-11	CARBON	82K	5%	1/4W	
R2164	1-249-430-11	CARBON	12K	5%	1/4W	
R2169	1-249-422-11	CARBON	2.7K	5%	1/4W	
R2193	1-249-429-11	CARBON	10K	5%	1/4W	
R2201	1-249-429-11	CARBON	10K	5%	1/4W	
R2202	1-249-405-11	CARBON	100	5%	1/4W	
R2203	1-249-405-11	CARBON	100	5%	1/4W	
R2207	1-249-429-11	CARBON	10K	5%	1/4W	
R2208	1-249-429-11	CARBON	10K	5%	1/4W	
R2209	1-249-420-11	CARBON	1.8K	5%	1/4W	
R2210	1-249-405-11	CARBON	100	5%	1/4W	
R2216	1-249-413-11	CARBON	470	5%	1/4W	
R2217	1-249-415-11	CARBON	680	5%	1/4W	
R2218	1-249-420-11	CARBON	1.8K	5%	1/4W	
R2220	1-249-433-11	CARBON	22K	5%	1/4W	
R2221	1-249-429-11	CARBON	10K	5%	1/4W	
R2222	1-249-429-11	CARBON	10K	5%	1/4W	
R2223	1-247-889-00	CARBON	270K	5%	1/4W	
R2224	1-247-889-00	CARBON	270K	5%	1/4W	
R2225	1-249-417-11	CARBON	1K	5%	1/4W	
R2226	1-249-420-11	CARBON	1.8K	5%	1/4W	
R2231	1-249-429-11	CARBON	10K	5%	1/4W	
R2232	1-249-429-11	CARBON	10K	5%	1/4W	
R2236	1-249-429-11	CARBON	10K	5%	1/4W	
R2240	1-249-429-11	CARBON	10K	5%	1/4W	
		<TUNER>				
TU2101	⚠ 1-465-301-11	TUNER, ET (UV-816(PLL))				
		<IF BLOCK>				
VF2101	1-464-960-21	IF BLOCK (IFG-389)				
		<CRYSTAL>				
X2201	1-579-112-11	VIBRATOR, CRYSTAL				
X2202	1-579-108-11	VIBRATOR, CRYSTAL				
X2203	1-527-726-00	VIBRATOR, CRYSTAL				

****

*1-636-582-11	F1 BOARD ********				
*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P				
*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P				
*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P				
*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)				
*1-564-215-11	PIN, CONNECTOR 4P				
*1-564-506-11	PLUG, CONNECTOR 3P				
*1-564-509-11	PLUG, CONNECTOR 6P				

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<CAPACITOR>				
C651	⚠ 1-136-519-11	FILM	0.47MF	20%	300V	
C652	⚠ 1-136-518-11	FILM	0.33MF	20%	300V	
C658	⚠ 1-162-578-51	CERAMIC	0.0047MF	20%	400V	
C659	⚠ 1-162-578-51	CERAMIC	0.0047MF	20%	400V	
C660	⚠ 1-162-578-51	CERAMIC	0.0047MF	20%	400V	
C661	⚠ 1-162-578-51	CERAMIC	0.0047MF	20%	400V	
C662	⚠ 1-161-964-61	CERAMIC	0.0047MF		250V	
C663	⚠ 1-161-964-61	CERAMIC	0.0047MF		250V	
C664	1-162-599-12	CERAMIC	0.0047MF		250V	
C665	1-125-555-11	ELECT	330MF	20%	400V	
C671	1-124-911-95	ELECT	220MF	20%	50V	
C672	1-124-556-11	ELECT	2200MF	20%	16V	
C673	1-123-875-11	ELECT	10MF	20%	50V	
C674	1-124-473-95	ELECT	1000MF	20%	10V	
C675	1-124-910-11	ELECT	47MF	20%	50V	
C676	1-123-875-11	ELECT	10MF	20%	50V	
C677	1-126-176-11	ELECT	220MF	20%	10V	
C678	1-124-910-11	ELECT	47MF	20%	50V	
C679	⚠ 1-161-964-61	CERAMIC	0.0047MF		250V	
		<DIODE>				
D651	⚠ 8-719-946-90	DIODE KBU4JL-6088				
D670	⚠ 8-719-521-10	DIODE S1VB10-S				
D671	⚠ 8-719-521-10	DIODE S1VB10-S				
D672	8-719-109-90	DIODE RD5.6ES-B3				
D673	8-719-911-19	DIODE 1SS119				
D674	8-719-911-19	DIODE 1SS119				
D675	8-719-911-19	DIODE 1SS119				
D676	8-719-911-19	DIODE 1SS119				
D677	8-719-911-19	DIODE 1SS119				
		<IC>				
IC671	8-759-982-13	IC RC7812FA				
		<TRANSFORMER>				
LF651	⚠ 1-424-436-11	TRANSFORMER, LINE FILTER				
LF652	⚠ 1-424-436-11	TRANSFORMER, LINE FILTER				
LF653	⚠ 1-421-592-11	TRANSFORMER, FERRITE				
T671	⚠ 1-450-263-11	TRANSFORMER, POWER				
		<TRANSISTOR>				
Q671	8-729-109-53	TRANSISTOR 2SD795A-P				
Q672	8-729-900-36	TRANSISTOR DTC124ES				
Q673	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q674	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q675	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R651	⚠ 1-205-949-11	WIREWOUND	1.8	5%	10W	F
R652	⚠ 1-205-949-11	WIREWOUND	1.8	5%	10W	F
R653	⚠ 1-244-945-91	CARBON	1M	5%	1/2W	
R658	⚠ 1-218-265-91	METAL GLAZE	8.2M	5%	1W	
R671	⚠ 1-249-377-91	CARBON	0.47	5%	1/4W	F
R672	⚠ 1-249-377-91	CARBON	0.47	5%	1/4W	F
R674	1-249-423-11	CARBON	3.3K	5%	1/4W	
R675	1-249-421-11	CARBON	2.2K	5%	1/4W	
R676	1-249-425-11	CARBON	4.7K	5%	1/4W	
R677	1-249-421-11	CARBON	2.2K	5%	1/4W	
R678	1-249-423-11	CARBON	3.3K	5%	1/4W	
R680	1-249-431-11	CARBON	15K	5%	1/4W	
R681	1-249-419-11	CARBON	1.5K	5%	1/4W	
		<RELAY>				
RY651	⚠ 1-515-579-11	RELAY				

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

<THERMISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
THP651⚠	1-808-059-31	THERMISTOR, POSITIVE	

****

*1-636-574-11 F2 BOARD
****

*1-566-664-11 PIN, CONNECTOR 4P

<FUSE>

F451 ⚠	1-532-350-11	FUSE, TIME-LAG 4A/250V
	1-533-230-11	HOLDER, FUSE; F451

<SWITCH>

S451 ⚠	1-571-433-11	SWITCH, PUSH (AC POWER)

****

*A-1632-015-A A BOARD, COMPLETE
****

*1-560-290-00 PLUG, CONNECTOR (2.5MM PITCH)
*1-564-881-11 PLUG, CONNECTOR 4P
*1-564-886-21 PLUG, CONNECTOR 9P
*1-565-393-11 CONNECTOR, BOARD TO BOARD

*1-565-503-11 CONNECTOR, BOARD TO BOARD 12P

<CAPACITOR>

C101	1-126-233-11	ELECT	22MF	20%	50V
C102	1-126-103-11	ELECT	470MF	20%	16V
C104	1-124-910-11	ELECT	47MF	20%	50V
C106	1-126-233-11	ELECT	22MF	20%	50V
C108	1-136-165-00	FILM	0.1MF	5%	50V
C109	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C111	1-124-925-11	ELECT	2.2MF	20%	50V
C115	1-124-925-11	ELECT	2.2MF	20%	50V
C127	1-124-122-11	ELECT	100MF	20%	50V
C128	1-124-910-11	ELECT	47MF	20%	50V
C129	1-124-910-11	ELECT	47MF	20%	50V
C138	1-136-165-00	FILM	0.1MF	5%	50V
C171	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C172	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C177	1-102-074-00	CERAMIC	0.001MF	10%	50V
C181	1-101-004-00	CERAMIC	0.01MF		50V

<IC>

IC103	8-759-979-62	IC PCF8574

<COIL>

L100	1-410-116-11	INDUCTOR	0.56MMH
L101	1-408-225-00	INDUCTOR	3.3UH
L102	1-408-413-00	INDUCTOR	22UH
L107	1-408-397-00	INDUCTOR	1UH

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q113	8-729-271-22	TRANSISTOR 2SC2712-G	
Q114	8-729-271-22	TRANSISTOR 2SC2712-G	
Q115	8-729-271-22	TRANSISTOR 2SC2712-G	
Q116	8-729-271-22	TRANSISTOR 2SC2712-G	
Q125	8-729-900-89	TRANSISTOR DTC144ES	
Q126	8-729-901-06	TRANSISTOR DTA144EK	
Q181	8-729-119-78	TRANSISTOR 2SC2785-HFE	

<RESISTOR>

JR252	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR253	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR255	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR256	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR257	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR258	1-216-296-00	METAL GLAZE	0	5%	1/8W
R101	1-216-025-00	METAL GLAZE	100	5%	1/10W
R105	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R107	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R108	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R110	1-249-429-11	CARBON	10K	5%	1/4W
R111	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R116	1-216-023-00	METAL GLAZE	82	5%	1/10W
R118	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R128	1-216-027-00	METAL GLAZE	120	5%	1/10W
R129	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R130	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R157	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R158	1-249-405-11	CARBON	100	5%	1/4W
R159	1-249-405-11	CARBON	100	5%	1/4W
R161	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R162	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R163	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R164	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R165	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R167	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R168	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R169	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R181	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R182	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R193	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R194	1-216-017-00	METAL GLAZE	47	5%	1/10W
R195	1-216-017-00	METAL GLAZE	47	5%	1/10W
R196	1-216-113-00	METAL GLAZE	470K	5%	1/10W

<TUNER>

TU101⚠	1-465-301-11	TUNER, ET (UV-816(PLL))

<IF BLOCK>

VIF101	1-466-154-21	IF BLOCK (IFG-389S)

****

1-464-964-21 SIF BOARD (IF BLOCK IFG-5.5S)
****

*1-565-488-11 CONNECTOR, BOARD TO BOARD 12P

<CAPACITOR>

C1	1-164-232-11	CERAMIC CHIP	0.01MF	50V
C2	1-164-232-11	CERAMIC CHIP	0.01MF	50V
C3	1-164-232-11	CERAMIC CHIP	0.01MF	50V
C4	1-164-232-11	CERAMIC CHIP	0.01MF	50V

SIF C

REF.NO.	PART NO.	DESCRIPTION			REMARK
C5	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C6	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C7	1-124-791-11	ELECT	1MF	20%	50V
C8	1-123-875-11	ELECT	10MF	20%	50V
C9	1-130-471-00	MYLAR	0.001MF	5%	50V
C10	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C11	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C12	1-136-298-00	FILM	0.0033MF	2%	100V
C13	1-124-477-11	ELECT	47MF	20%	16V
C14	1-124-477-11	ELECT	47MF	20%	16V
C15	1-124-477-11	ELECT	47MF	20%	16V
C16	1-124-477-11	ELECT	47MF	20%	16V
C17	1-123-875-11	ELECT	10MF	20%	50V
C18	1-106-367-00	MYLAR	0.01MF	10%	400V
C19	1-106-367-00	MYLAR	0.01MF	10%	400V
C20	1-126-233-11	ELECT	22MF	20%	50V
C21	1-126-233-11	ELECT	22MF	20%	50V
C22	1-106-220-00	MYLAR	0.1MF	10%	100V
C23	1-106-228-00	MYLAR	0.22MF	10%	100V
C24	1-124-963-11	ELECT	33MF	20%	16V
C25	1-106-375-12	MYLAR	0.022MF	10%	250V
C26	1-106-383-00	MYLAR	0.047MF	10%	100V
C27	1-124-791-11	ELECT	1MF	20%	50V
C28	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C29	1-124-791-11	ELECT	1MF	20%	50V
C30	1-124-791-11	ELECT	1MF	20%	50V
C31	1-106-367-00	MYLAR	0.01MF	10%	400V
C32	1-130-479-00	MYLAR	0.0047MF	5%	50V
C33	1-163-081-00	CERAMIC CHIP	0.22MF		25V
C34	1-106-228-00	MYLAR	0.22MF	10%	100V
C35	1-123-875-11	ELECT	10MF	20%	50V
C36	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C37	1-124-477-11	ELECT	47MF	20%	16V
C38	1-124-477-11	ELECT	47MF	20%	16V

<DIODE>

D3	8-719-400-18	DIODE MA152WK

<IC>

IC1	8-759-003-90	IC TBA129
IC2	8-759-003-90	IC TBA129
IC3	8-759-030-48	IC TDA6600-2
IC4	8-759-946-99	IC TDA2595-V7

<COIL>

L1	1-408-410-00	INDUCTOR	12UH
L2	1-408-410-00	INDUCTOR	12UH
L3	1-410-064-11	INDUCTOR	2.7MMH
L4	1-408-421-00	INDUCTOR	100UH
L5	1-408-421-00	INDUCTOR	100UH

<TRANSISTOR>

Q2	8-729-901-00	TRANSISTOR DTC124EK
Q3	8-729-920-71	TRANSISTOR 2SA1037K-QR
Q4	8-729-901-00	TRANSISTOR DTC124EK

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
JC1	1-216-296-00	METAL GLAZE	0	5%	1/8W
JC2	1-216-296-00	METAL GLAZE	0	5%	1/8W
JC3	1-216-296-00	METAL GLAZE	0	5%	1/8W
JC4	1-216-296-00	METAL GLAZE	0	5%	1/8W
JC5	1-216-296-00	METAL GLAZE	0	5%	1/8W
R1	1-216-045-00	METAL GLAZE	680	5%	1/10W
R2	1-216-043-00	METAL GLAZE	560	5%	1/10W
R3	1-216-043-00	METAL GLAZE	560	5%	1/10W
R5	1-216-045-00	METAL GLAZE	680	5%	1/10W
R6	1-216-043-00	METAL GLAZE	560	5%	1/10W
R7	1-216-043-00	METAL GLAZE	560	5%	1/10W
R9	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R10	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R11	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R12	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R15	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R16	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R17	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R18	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R19	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R20	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R22	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R24	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R25	1-216-077-00	METAL GLAZE	15K	5%	1/10W

<VARIABLE RESISTOR>

RV1	1-238-547-11	RES, ADJ, CARBON 10K
RV2	1-238-549-11	RES, ADJ, CARBON 47K

<FILTER>

SFT1	1-527-840-00	FILTER, CERAMIC
SFT2	1-527-839-00	FILTER, CERAMIC

****

	*A-1638-010-A	C BOARD, COMPLETE *****************
	1-506-348-99	PIN, CONNECTOR 3P
	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
	*1-564-506-11	PLUG, CONNECTOR 3P
	*1-564-509-11	PLUG, CONNECTOR 6P
	*4-379-160-01	COVER (REAR LID), CV
	*4-379-167-01	COVER (MAIN), CV

<CAPACITOR>

C703	1-102-822-00	CERAMIC	390PF	5%	50V
C704	1-102-116-00	CERAMIC	680PF	10%	50V
C705	1-102-980-00	CERAMIC	270PF	5%	50V
C706	1-102-116-00	CERAMIC	680PF	10%	50V
C707	1-162-116-00	CERAMIC	680PF	10%	2KV
C708	1-162-114-00	CERAMIC	0.0047MF		2KV
C709	1-102-116-00	CERAMIC	680PF	10%	50V
C710	1-123-948-00	ELECT	22MF	20%	250V
C711	1-101-880-00	CERAMIC	47PF	5%	50V
C712	1-102-820-00	CERAMIC	330PF	5%	50V
C714	1-126-103-11	ELECT	470MF	20%	16V
C716	1-162-622-11	CERAMIC	330PF	10%	400V
C717	1-102-114-00	CERAMIC	470PF	10%	50V
C718	1-102-114-00	CERAMIC	470PF	10%	50V
C719	1-102-114-00	CERAMIC	470PF	10%	50V
C721	1-123-875-11	ELECT	10MF	20%	50V

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D701	8-719-911-19	DIODE 1SS119	
D702	8-719-911-19	DIODE 1SS119	
D703	8-719-911-19	DIODE 1SS119	
D704	8-719-911-19	DIODE 1SS119	
D705	8-719-911-19	DIODE 1SS119	
D706	8-719-911-19	DIODE 1SS119	
D707	8-719-911-19	DIODE 1SS119	
D708	8-719-911-19	DIODE 1SS119	
D709	8-719-911-19	DIODE 1SS119	
D710	8-719-911-19	DIODE 1SS119	
D711	8-719-300-33	DIODE RU-3AM	
D713	8-719-110-14	DIODE RD9.1ES-B3	

<JACK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
J701	1-526-798-51	SOCKET, PICTURE TUBE	

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L704	1-410-878-11	INDUCTOR	33UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-326-11	TRANSISTOR 2SC2611	
	*4-386-664-01	SPRING; Q703	
Q704	8-729-200-17	TRANSISTOR 2SA1091-O	
Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q706	8-729-326-11	TRANSISTOR 2SC2611	
	*4-386-664-01	SPRING; Q706	
Q707	8-729-200-17	TRANSISTOR 2SA1091-O	
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q709	8-729-326-11	TRANSISTOR 2SC2611	
	*4-386-664-01	SPRING; Q709	
Q710	8-729-200-17	TRANSISTOR 2SA1091-O	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R704	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R705	1-202-824-00	SOLID	3.3K	10%	1/2W	
R706	1-249-409-11	CARBON	220	5%	1/4W	
R707	1-249-411-11	CARBON	330	5%	1/4W	
R708	1-249-397-11	CARBON	22	5%	1/4W	
R709	1-202-844-00	SOLID	330K	10%	1/2W	
R710	1-214-897-00	METAL	22K	1%	W	
R712	1-249-417-11	CARBON	1K	5%	1/4W	
R713	1-214-905-00	METAL	47K	1%	W	
R714	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R715	1-202-824-00	SOLID	3.3K	10%	1/2W	
R716	1-249-409-11	CARBON	220	5%	1/4W	
R717	1-249-415-11	CARBON	680	5%	1/4W	
R718	1-202-814-11	SOLID	33K	10%	1/2W	
R720	1-249-423-11	CARBON	3.3K	5%	1/4W	
R721	1-202-842-11	SOLID	220K	10%	1/2W	
R722	1-202-848-00	SOLID	680K	10%	1/2W	
R723	1-249-417-11	CARBON	1K	5%	1/4W	
R724	1-202-846-00	SOLID	470K	10%	1/2W	
R725	1-202-838-00	SOLID	100K	10%	1/2W	
R726	1-202-824-00	SOLID	3.3K	10%	1/2W	
R727	1-249-409-11	CARBON	220	5%	1/4W	
R728	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R729	1-249-416-11	CARBON	820	5%	1/4W	
R731	1-249-423-11	CARBON	3.3K	5%	1/4W	
R732	1-249-415-11	CARBON	680	5%	1/4W	
R733	1-249-415-11	CARBON	680	5%	1/4W	
R734	1-249-405-11	CARBON	100	5%	1/4W	
R735	1-214-915-00	METAL	120K	1%	W	
R736	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R737	1-214-913-00	METAL	100K	1%	W	
R738	1-202-549-00	SOLID	100	10%	1/2W	
R739	1-249-417-11	CARBON	1K	5%	1/4W	
R740	1-202-846-00	SOLID	470K	10%	1/2W	
R741	1-202-837-00	SOLID	82K	10%	1/2W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	
RV702	1-230-619-11	RES, ADJ, METAL GLAZE 110M	
RV703	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV704	1-228-991-00	RES, ADJ, CARBON 2.2K	

****

*A-1642-025-A D BOARD, COMPLETE
****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P	
	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P	
	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
	*1-559-991-41	CONNECTOR ASSY 1P	
	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)	
	*1-564-104-00	PIN, CONNECTOR 3P	
	*1-564-506-11	PLUG, CONNECTOR 3P	
	*1-564-507-11	PLUG, CONNECTOR 4P	
	*1-564-515-11	PLUG, CONNECTOR 12P	
	*1-568-536-11	PLUG (MINIATURE DY) 6P	
	*4-341-751-01	EYELET (EY5,EY6,EY7,EY8,EY9,EY10,EY14, EY15,EY16,EY17,EY26,EY27,EY28,EY29,EY30)	
	*4-341-752-01	EYELET (EY1,EY2,EY3,EY4,EY12,EY13,EY20, EY21,EY23,EY24)	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C501	1-124-927-11	ELECT	4.7MF	20%	50V	
C502	1-124-927-11	ELECT	4.7MF	20%	50V	
C503	1-106-371-00	MYLAR	0.015MF	10%	400V	
C504	1-101-361-00	CERAMIC	150PF	5%	50V	
C505	1-130-473-00	MYLAR	0.0015MF	5%	50V	
C506	1-106-375-12	MYLAR	0.022MF	10%	250V	
C508	1-106-375-12	MYLAR	0.022MF	10%	250V	
C509	1-106-220-00	MYLAR	0.1MF	10%	100V	
C510	1-161-959-00	CERAMIC	22PF	10%	500V	
C511	1-108-686-11	MYLAR	0.0033MF	10%	100V	
C513	1-108-680-11	MYLAR	0.001MF	10%	100V	
C514	1-106-228-00	MYLAR	0.22MF	10%	100V	
C515	1-124-791-11	ELECT	1MF	20%	50V	
C516	1-102-112-00	CERAMIC	330PF	10%	50V	
C518	1-124-902-00	ELECT	0.47MF	20%	50V	
C519	1-136-173-00	FILM	0.47MF	5%	50V	
C520	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C521	1-106-220-00	MYLAR	0.1MF	10%	100V	
C522	1-126-105-11	ELECT	1000MF	20%	35V	
C523	1-108-680-11	MYLAR	0.001MF	10%	100V	
C524	1-108-686-11	MYLAR	0.0033MF	10%	100V	
C525	1-102-973-00	CERAMIC	100PF	5%	50V	
C527	1-106-220-00	MYLAR	0.1MF	10%	100V	
C531	1-126-104-11	ELECT	470MF	20%	25V	
C532	1-124-122-11	ELECT	100MF	20%	50V	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
C533	1-106-216-00	MYLAR	0.068MF	10%	100V
C534	1-124-120-11	ELECT	220MF	20%	25V
C536	1-131-365-00	TANTALUM	10MF	10%	16V
C537	1-124-791-11	ELECT	1MF	20%	50V
C538	1-108-680-11	MYLAR	0.001MF	10%	100V
C539	1-102-820-00	CERAMIC	330PF	5%	50V
C541	1-124-902-00	ELECT	0.47MF	20%	50V
C550	1-101-004-00	CERAMIC	0.01MF		50V
C578	1-124-927-11	ELECT	4.7MF	20%	50V
C593	1-102-820-00	CERAMIC	330PF	5%	50V
C596	1-106-220-00	MYLAR	0.1MF	10%	100V
C597	1-102-951-00	CERAMIC	15PF	10%	50V
C801	1-126-105-11	ELECT	1000MF	20%	35V
C802	1-102-228-00	CERAMIC	470PF	10%	500V
C804	1-123-948-00	ELECT	22MF	20%	250V
C805 ⚠	1-162-114-51	CERAMIC	0.0047MF		2KV
C806	1-106-387-00	MYLAR	0.068MF	10%	200V
C807	1-106-395-00	MYLAR	0.15MF	10%	200V
C810	1-123-024-21	ELECT	33MF		160V
C811	1-136-541-11	FILM	1.5MF	5%	200V
C812	1-123-946-00	ELECT	4.7MF	20%	250V
C813	1-102-212-00	CERAMIC	820PF	10%	500V
C814 ⚠	1-161-731-11	CERAMIC	0.001MF	10%	2KV
C815	1-136-597-11	FILM	0.89MF	5%	200V
C817	1-136-686-11	FILM	0.018MF	3%	1.4KV
C818	1-136-759-11	FILM	0.039MF	5%	630V
C819 ⚠	1-162-116-51	CERAMIC	680PF	10%	2KV
C820 ⚠	1-110-189-81	MYLAR	0.0082MF	10%	400V
C821 ⚠	1-162-116-51	CERAMIC	680PF	10%	2KV
C822	1-102-114-00	CERAMIC	470PF	10%	50V
C823	1-106-359-00	MYLAR	0.0047MF	10%	400V
C824	1-102-212-00	CERAMIC	820PF	10%	500V
C828	1-106-383-00	MYLAR	0.047MF	10%	100V
C829	1-110-184-91	MYLAR	0.033MF	20%	250V
C849	1-102-112-00	CERAMIC	330PF	10%	50V
C850	1-101-821-00	CERAMIC	0.0022MF		500V
C851	1-126-105-11	ELECT	1000MF	20%	35V
C852	1-102-002-00	CERAMIC	680PF	10%	500V
C854	1-124-122-11	ELECT	100MF	20%	50V
C855	1-124-791-11	ELECT	1MF	20%	50V
C860	1-106-399-00	MYLAR	0.22MF	10%	200V
C861 ⚠	1-161-731-11	CERAMIC	0.001MF	10%	2KV
C1501	1-124-925-11	ELECT	2.2MF	20%	50V
C1502	1-123-875-11	ELECT	10MF	20%	50V
C1503	1-108-680-11	MYLAR	0.001MF	10%	100V
C1504	1-124-910-11	ELECT	47MF	20%	50V
C1505	1-106-383-00	MYLAR	0.047MF	10%	100V
C1507	1-108-686-11	MYLAR	0.0033MF	10%	100V
C1508	1-123-875-11	ELECT	10MF	20%	50V
C1509	1-124-791-11	ELECT	1MF	20%	50V
C1511	1-123-875-11	ELECT	10MF	20%	50V
C1512	1-106-367-00	MYLAR	0.01MF	10%	100V
C1513	1-102-963-00	CERAMIC	33PF	5%	50V
C1520	1-102-108-00	CERAMIC	150PF	10%	50V
C1551	1-124-902-00	ELECT	0.47MF	20%	50V
C1552	1-124-122-11	ELECT	100MF	20%	50V
C1553	1-102-228-00	CERAMIC	470PF	10%	500V
C1638	1-106-228-00	MYLAR	0.22MF	10%	100V
C1639	1-101-006-00	CERAMIC	0.047MF		50V
C1640	1-101-006-00	CERAMIC	0.047MF		50V
C1651	1-106-220-00	MYLAR	0.1MF	10%	100V
C1654	1-106-220-00	MYLAR	0.1MF	10%	100V
C1655	1-106-220-00	MYLAR	0.1MF	10%	100V
C1656	1-124-902-00	ELECT	0.47MF	20%	50V
C1657	1-106-383-00	MYLAR	0.047MF	10%	100V
C1707	1-106-363-00	MYLAR	0.0068MF	10%	400V
C1708	1-106-359-00	MYLAR	0.0047MF	10%	400V
C1710	1-106-224-00	MYLAR	0.15MF	10%	100V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C1711	1-124-925-11	ELECT	2.2MF	20%	50V
C1712	1-124-927-11	ELECT	4.7MF	20%	50V
C1713	1-124-910-11	ELECT	47MF	20%	50V
C1714	1-124-911-95	ELECT	220MF	20%	50V
C1715	1-124-910-11	ELECT	47MF	20%	50V
C1716	1-106-228-00	MYLAR	0.22MF	10%	100V
C1717	1-124-120-11	ELECT	220MF	20%	25V
C1718	1-136-165-00	FILM	0.1MF	5%	50V
C1719	1-124-927-11	ELECT	4.7MF	20%	50V
C1720	1-124-927-11	ELECT	4.7MF	20%	50V
C1721	1-123-875-11	ELECT	10MF	20%	50V
C1722	1-124-927-11	ELECT	4.7MF	20%	50V
C1723	1-123-875-11	ELECT	10MF	20%	50V
C1724	1-126-233-11	ELECT	22MF	20%	50V
C1725	1-124-360-00	ELECT	1000MF	20%	16V
C1726	1-124-910-11	ELECT	47MF	20%	50V
C1727	1-124-910-11	ELECT	47MF	20%	50V
C1734	1-124-360-00	ELECT	1000MF	20%	16V
C1735	1-106-379-12	MYLAR	0.033MF	10%	250V
C1736	1-124-791-11	ELECT	1MF	20%	50V
C1740	1-102-244-00	CERAMIC	220PF	10%	500V
C5502	1-124-119-00	ELECT	330MF	20%	16V
C5505	1-124-463-00	ELECT	0.1MF	20%	50V

<FILTER>

CF501	1-567-888-11	OSCILLATOR, CERAMIC

<DIODE>

D502	8-719-200-02	DIODE 10E2
D504	8-719-911-55	DIODE U05G
D506	8-719-016-42	DIODE MC932
D508	8-719-911-19	DIODE 1SS119
D511	8-719-911-55	DIODE U05G
D512	8-719-911-55	DIODE U05G
D513	8-719-109-81	DIODE RD4.7ES-B2
D801	8-719-300-33	DIODE RU-3AM
D802	8-719-300-33	DIODE RU-3AM
D803	8-719-901-19	DIODE V11N
D804	8-719-911-55	DIODE U05G
D805	8-719-911-55	DIODE U05G
D806	8-719-945-80	DIODE ERC06-15S
D807	8-719-945-80	DIODE ERC06-15S
D808	8-719-900-26	DIODE ERD29-08J
D809	8-719-911-19	DIODE 1SS119
D850	8-719-979-85	DIODE EGP20G
D1501	8-719-300-33	DIODE RU-3AM
D1502	8-719-911-19	DIODE 1SS119
D1503	8-719-911-19	DIODE 1SS119
D1504	8-719-911-19	DIODE 1SS119
D1505	8-719-016-42	DIODE MC932
D1515	8-719-911-19	DIODE 1SS119
D1552	8-719-300-33	DIODE RU-3AM
D1652	8-719-200-02	DIODE 10E2
D1701	8-719-979-85	DIODE EGP20G
D1702	8-719-980-78	DIODE ERA83-006
D1703	8-719-980-78	DIODE ERA83-006
D1704	8-719-911-19	DIODE 1SS119
D1705	8-719-911-19	DIODE 1SS119
D1707	8-719-300-33	DIODE RU-3AM
D1708	8-719-109-81	DIODE RD4.7ES-B2
D1709	8-719-109-89	DIODE RD5.6ES-B2

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1710	8-719-109-89	DIODE RD5.6ES-B2	
		<IC>	
IC501	8-759-970-73	IC TEA2028B	
IC502	8-759-944-57	IC TDA8170	
IC503	8-749-920-60	IC STR90120	
IC1501	8-759-942-16	IC TEA2031A	
IC1701	8-759-103-93	IC UPC393C	
IC1702	8-759-112-93	IC UPC4570HA-1	
IC1704	8-759-982-13	IC RC7812FA	
	*4-363-147-00	HEAT SINK, H.PIN; IC1704	
		<COIL>	
L501	1-408-225-00	INDUCTOR 3.3UH	
L801	1-459-111-00	COIL, DRAM CORE (CDI)	
L803	1-459-104-00	COIL, DUST CORE	
L804	1-408-235-00	INDUCTOR 2.2MMH	
L806	1-459-111-00	COIL, DRAM CORE (CDI)	
L807	1-408-938-00	INDUCTOR 22UH	
L809	*1-420-872-00	COIL, AIR CORE	
L811	1-459-104-00	COIL, DUST CORE	
L812	1-408-698-00	INDUCTOR 8.2UH	
L850	1-408-225-00	INDUCTOR 3.3UH	
L1651	1-443-012-00	TRANSFORMER,DYNAMIC CONVERSION	
L1652	1-459-583-11	COIL (WITH CORE)	
L1653	1-408-247-00	INDUCTOR 33MMH	
L1654	1-408-421-00	INDUCTOR 100UH	
L1702	1-410-093-11	INDUCTOR 33MMH	
L1703	1-459-592-11	COIL (WITH CORE) (PMC)	
L1704	1-459-075-00	COIL,DYNAMIC CONVERSION CHOKE	
L1705	1-408-235-00	INDUCTOR 2.2MMH	
		<NEON LAMP>	
NL801	1-519-108-99	LAMP, NEON	
		<IC LINK>	
PS1659⚠	1-532-727-91	LINK, IC 0.25A	
		<TRANSISTOR>	
Q501	8-729-173-38	TRANSISTOR 2SA733-K	
Q502	8-729-173-38	TRANSISTOR 2SA733-K	
Q505	8-729-140-96	TRANSISTOR 2SD774-34	
Q506	8-729-140-97	TRANSISTOR 2SB734-34	
Q507	8-729-173-38	TRANSISTOR 2SA733-K	
Q509	8-729-900-80	TRANSISTOR DTC114ES	
Q510	8-729-900-80	TRANSISTOR DTC114ES	
Q591	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q592	8-729-900-80	TRANSISTOR DTC114ES	
Q804	8-729-305-01	TRANSISTOR 2SD1941-07	
	*4-378-214-01	HOLDER, TR; Q804	
Q805	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q806	8-729-122-12	TRANSISTOR 2SA1221-L	
Q807	8-729-107-53	TRANSISTOR 2SC2275A-P	
Q1551	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1552	8-729-208-71	TRANSISTOR 2SC3298B-O	
Q1608	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1653	8-729-195-82	TRANSISTOR 2SC2958-L	
Q1701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1703	8-729-208-71	TRANSISTOR 2SC3298B-O	

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1704	8-729-140-96	TRANSISTOR 2SD774-34	
Q1705	8-729-140-96	TRANSISTOR 2SD774-34	
Q1706	8-729-173-38	TRANSISTOR 2SA733-K	
Q1707	8-729-809-29	TRANSISTOR 2SC4159-E	
Q1708	8-729-140-97	TRANSISTOR 2SB734-34	
Q1709	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1710	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1711	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1712	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1716	8-729-900-80	TRANSISTOR DTC114ES	
Q1717	8-729-173-38	TRANSISTOR 2SA733-K	
		<RESISTOR>	
R500	1-247-897-11	CARBON 560K 5% 1/4W	
R501	1-247-708-11	CARBON 470 5% 1/4W	
R502	1-249-409-11	CARBON 220 5% 1/4W	
R503	1-249-410-11	CARBON 270 5% 1/4W	
R504	1-214-870-00	METAL 1.8K 1% W	
R509	1-249-424-11	CARBON 3.9K 5% 1/4W	
R510	1-249-426-11	CARBON 5.6K 5% 1/4W	
R511	1-247-719-11	CARBON 3.3K 5% 1/4W	
R513A	1-249-461-11	CARBON 18K 5% 1/4W	
R514	1-249-409-11	CARBON 220 5% 1/4W	
R515	1-249-423-11	CARBON 3.3K 5% 1/4W	
R516	1-249-408-11	CARBON 180 5% 1/4W	
R517	1-247-725-11	CARBON 10K 5% 1/4W	
R518	1-249-434-11	CARBON 27K 5% 1/4W	
R519	1-249-429-11	CARBON 10K 5% 1/4W	
R520	1-249-411-11	CARBON 330 5% 1/4W	
R521	1-247-700-11	CARBON 100 5% 1/4W	
R522	1-247-903-00	CARBON 1M 5% 1/4W	
R523	1-249-393-11	CARBON 10 5% 1/4W	
R524	1-249-421-11	CARBON 2.2K 5% 1/4W	
R525	1-249-417-11	CARBON 1K 5% 1/4W	
R526	1-212-889-00	FUSIBLE 220 5% 1/4W	F
R527	1-249-460-11	CARBON 15K 5% 1/4W	
R530	1-217-376-00	FUSIBLE 1.2 5% 1/4W	F
R531	1-247-881-00	CARBON 120K 5% 1/4W	
R532	1-247-713-11	CARBON 1K 5% 1/4W	
R533	1-249-393-11	CARBON 10 5% 1/4W	
R534	1-246-543-00	CARBON 820K 5% 1/4W	
R536	1-247-725-11	CARBON 10K 5% 1/4W	
R537	1-249-463-11	CARBON 27K 5% 1/4W	
R538	1-249-441-11	CARBON 100K 5% 1/4W	
R539	1-247-883-00	CARBON 150K 5% 1/4W	
R540	1-249-434-11	CARBON 27K 5% 1/4W	
R541	1-249-438-11	CARBON 56K 5% 1/4W	
R542	1-249-425-11	CARBON 4.7K 5% 1/4W	
R543	1-217-376-00	FUSIBLE 1.2 5% 1/4W	F
R544	1-247-745-11	CARBON 330 5% 1/2W	
R545	1-247-725-11	CARBON 10K 5% 1/4W	
R546	1-249-434-11	CARBON 27K 5% 1/4W	
R547	1-249-423-11	CARBON 3.3K 5% 1/4W	
R548	1-216-349-00	METAL OXIDE 1 5% 1W	F
R549	1-215-890-11	METAL OXIDE 470 5% 2W	F
R550	1-249-440-11	CARBON 82K 5% 1/4W	
R551	1-249-752-11	CARBON 3.9M 5% 1/4W	
R553	1-215-869-11	METAL OXIDE 1K 5% 1W	
R554	1-249-411-11	CARBON 330 5% 1/4W	
R555	1-249-749-00	CARBON 2.2M 5% 1/4W	
R556	1-249-405-11	CARBON 100 5% 1/4W	
R557	1-249-425-11	CARBON 4.7K 5% 1/4W	
R558	1-247-903-00	CARBON 1M 5% 1/4W	

D

REF.NO.	PART NO.	DESCRIPTION				REMARK
R559	1-249-427-11	CARBON	6.8K	5%	1/4W	
R560	1-249-411-11	CARBON	330	5%	1/4W	
R575	1-249-435-11	CARBON	33K	5%	1/4W	
R585	1-249-422-11	CARBON	2.7K	5%	1/4W	
R595	1-249-417-11	CARBON	1K	5%	1/4W	
R596	1-249-415-11	CARBON	680	5%	1/4W	
R802	1-249-474-11	CARBON	1	5%	1/2W	F
R805	1-249-474-11	CARBON	1	5%	1/2W	F
R806	1-249-467-11	CARBON	68K	5%	1/4W	
R807	1-215-869-11	METAL OXIDE	1K	5%	1W	
R809	1-247-756-11	CARBON	2.2K	5%	1/2W	
R815	1-212-972-00	FUSIBLE	39	5%	1/2W	F
R816	1-215-868-00	METAL OXIDE	680	5%	1W	
R817	1-249-417-11	CARBON	1K	5%	1/4W	
R820	1-249-403-11	CARBON	68	5%	1/4W	
R821	1-217-826-11	FUSIBLE	10K	5%	1/4W	
R822	1-217-778-11	FUSIBLE	1K	5%	1W	F
R825	1-216-341-11	METAL OXIDE	0.22	5%	1W	F
R831	1-217-811-11	FUSIBLE	0.47	5%	1/4W	F
R832	1-212-865-00	FUSIBLE	22	5%	1/4W	
R833	1-216-379-11	METAL OXIDE	6.8	5%	2W	F
R834	1-249-482-11	CARBON	4.7	5%	1/2W	F
R835	1-215-884-11	METAL OXIDE	47	5%	2W	
R836	1-215-884-11	METAL OXIDE	47	5%	2W	
R837	1-215-911-11	METAL OXIDE	100	5%	3W	F
R839	1-249-429-11	CARBON	10K	5%	1/4W	
R840	1-249-496-11	CARBON	100K	5%	1/2W	
R841	1-247-713-11	CARBON	1K	5%	1/4W	
R842	1-247-713-11	CARBON	1K	5%	1/4W	
R843	1-216-389-11	METAL OXIDE	1	5%	3W	F
R844	1-214-864-00	METAL	1K	1%	W	
R845	1-214-913-00	METAL	100K	1%	1/2W	
R846	1-249-496-11	CARBON	100K	5%	1/2W	
R847	1-249-429-11	CARBON	10K	5%	1/4W	
R848	1-215-925-11	METAL OXIDE	22K	5%	3W	F
R849	1-215-925-11	METAL OXIDE	22K	5%	3W	F
R1501	1-249-462-11	CARBON	22K	5%	1/4W	
R1502	1-249-434-11	CARBON	27K	5%	1/4W	
R1503	1-247-895-00	CARBON	470K	5%	1/4W	
R1504	1-249-435-11	CARBON	33K	5%	1/4W	
R1505	1-249-433-11	CARBON	22K	5%	1/4W	
R1506	1-247-895-00	CARBON	470K	5%	1/4W	
R1507	1-247-895-00	CARBON	470K	5%	1/4W	
R1508	1-249-438-11	CARBON	56K	5%	1/4W	
R1509	1-249-441-11	CARBON	100K	5%	1/4W	
R1510	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1511	1-249-417-11	CARBON	1K	5%	1/4W	
R1512	1-247-725-11	CARBON	10K	5%	1/4W	
R1513	1-247-883-00	CARBON	150K	5%	1/4W	
R1514	1-249-417-11	CARBON	1K	5%	1/4W	
R1515	1-249-439-11	CARBON	68K	5%	1/4W	
R1516	1-249-432-11	CARBON	18K	5%	1/4W	
R1517	1-249-411-11	CARBON	330	5%	1/4W	
R1518	1-249-429-11	CARBON	10K	5%	1/4W	
R1519	1-247-897-11	CARBON	560K	5%	1/4W	
R1521	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1523	1-247-903-00	CARBON	1M	5%	1/4W	
R1552	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1553	1-215-917-11	METAL OXIDE	1K	5%	3W	F
R1554	1-249-407-11	CARBON	150	5%	1/4W	
R1602	1-247-881-00	CARBON	120K	5%	1/4W	
R1636	1-249-431-11	CARBON	15K	5%	1/4W	
R1638	1-249-435-11	CARBON	33K	5%	1/4W	
R1643	1-247-721-11	CARBON	4.7K	5%	1/4W	
R1656	1-249-415-11	CARBON	680	5%	1/4W	
R1657	1-249-411-11	CARBON	330	5%	1/4W	
R1658	1-249-411-11	CARBON	330	5%	1/4W	F
R1660	1-215-911-11	METAL OXIDE	100	5%	3W	F
R1720	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1721	1-249-429-11	CARBON	10K	5%	1/4W	
R1722	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1723	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1724	1-249-429-11	CARBON	10K	5%	1/4W	
R1725	1-249-429-11	CARBON	10K	5%	1/4W	
R1726	1-249-441-11	CARBON	100K	5%	1/4W	
R1728	1-215-890-11	METAL OXIDE	470	5%	2W	F
R1729	1-216-449-11	METAL OXIDE	56	5%	2W	
R1730	1-249-441-11	CARBON	100K	5%	1/4W	
R1731	1-215-869-11	METAL OXIDE	1K	5%	1W	
R1733	1-249-414-11	CARBON	560	5%	1/4W	
R1734	1-249-393-11	CARBON	10	5%	1/4W	
R1735	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1736	1-247-895-00	CARBON	470K	5%	1/4W	
R1737	1-249-429-11	CARBON	10K	5%	1/4W	
R1738	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1739	1-249-429-11	CARBON	10K	5%	1/4W	
R1740	1-249-435-11	CARBON	33K	5%	1/4W	
R1741	1-249-429-11	CARBON	10K	5%	1/4W	
R1742	1-249-432-11	CARBON	18K	5%	1/4W	
R1743	1-247-895-00	CARBON	470K	5%	1/4W	
R1744	1-249-429-11	CARBON	10K	5%	1/4W	
R1745	1-249-415-11	CARBON	680	5%	1/4W	
R1746	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1747	1-249-429-11	CARBON	10K	5%	1/4W	
R1748	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1749	1-249-441-11	CARBON	100K	5%	1/4W	
R1750	1-249-409-11	CARBON	220	5%	1/4W	
R1751	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1752	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1753	1-249-417-11	CARBON	1K	5%	1/4W	
R1754	1-249-429-11	CARBON	10K	5%	1/4W	
R1755	1-249-429-11	CARBON	10K	5%	1/4W	
R1756	1-247-713-11	CARBON	1K	5%	1/4W	
R1757	1-249-413-11	CARBON	470	5%	1/4W	
R1758	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1759	1-215-906-11	METAL OXIDE	15	5%	3W	F
R1760	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1761	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1762	1-215-858-00	METAL OXIDE	15	5%	1W	
R1763	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1764	1-249-409-11	CARBON	220	5%	1/4W	
R1774	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1775	1-249-429-11	CARBON	10K	5%	1/4W	
R1776	1-247-706-11	CARBON	330	5%	1/4W	
R1778	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1779	1-249-422-11	CARBON	2.7K	5%	1/4W	
R1780	1-249-437-11	CARBON	47K	5%	1/4W	
R1787	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1792	1-249-435-11	CARBON	33K	5%	1/4W	
R1794	1-249-419-11	CARBON	1.5K	5%	1/4W	
R5113	1-249-467-11	CARBON	68K	5%	1/4W	
R5501	1-247-725-11	CARBON	10K	5%	1/4W	
R5502	1-249-417-11	CARBON	1K	5%	1/4W	
R5503	1-249-429-11	CARBON	10K	5%	1/4W	
R5504	1-249-459-11	CARBON	12K	5%	1/4W	
R5505	1-215-870-11	METAL OXIDE	1.5K	5%	1W	
R5511	1-249-429-11	CARBON	10K	5%	1/4W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV502	1-238-016-11	RES, ADJ, CARBON 10K	
RV1501	1-238-023-11	RES, ADJ, CARBON 470K	
RV1502	1-238-016-11	RES, ADJ, CARBON 10K	
RV1503	1-238-017-11	RES, ADJ, CARBON 22K	
RV1504	1-238-012-11	RES, ADJ, CARBON 1K	
RV1505	1-238-023-11	RES, ADJ, CARBON 470K	
RV1506	1-238-017-11	RES, ADJ, CARBON 22K	
RV1507	1-238-009-11	RES, ADJ, CARBON 220	
RV1508	1-238-015-11	RES, ADJ, CARBON 4.7K	
RV1509	1-238-023-11	RES, ADJ, CARBON 470K	
RV1701	1-238-012-11	RES, ADJ, CARBON 1K	
RV1702	1-238-016-11	RES, ADJ, CARBON 10K	
RV1703	1-238-012-11	RES, ADJ, CARBON 1K	
RV1704	1-238-016-11	RES, ADJ, CARBON 10K	
RV1705	1-238-017-11	RES, ADJ, CARBON 22K	

<SPARK GAP>

REF.NO.	PART NO.	DESCRIPTION	REMARK
SG801	1-519-063-99	DISCHARGING GAP	

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
T801	1-437-090-00	HDT	
T802 ⚠	1-439-418-21	TRANSFORMER ASSY, FLYBACK (UX-1610)	
T803	1-413-059-00	TRANSFORMER, FERRITE (DFT)	
T804	1-459-957-11	TRANSFORMER	
T805	1-421-794-11	TRANSFORMER, FERRITE (PMT)	

* * *

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-636-577-11	VM BOARD ********	
	*1-564-506-11	PLUG, CONNECTOR 3P	
	*1-564-507-11	PLUG, CONNECTOR 4P	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C751	1-102-971-00	CERAMIC 82PF 5% 50V	
C752	1-106-349-00	MYLAR 0.0018MF 10% 100V	
C754	1-126-101-11	ELECT 100MF 20% 16V	
C755	1-102-973-00	CERAMIC 100PF 5% 50V	
C756	1-106-367-00	MYLAR 0.01MF 10% 400V	
C758	1-106-367-00	MYLAR 0.01MF 10% 400V	
C760	1-124-925-11	ELECT 2.2MF 20% 50V	
C761	1-106-220-00	MYLAR 0.1MF 10% 100V	
C763	1-124-122-11	ELECT 100MF 20% 35V	
C764	1-126-176-11	ELECT 220MF 20% 6.3V	
C765	1-101-006-00	CERAMIC 0.047MF 50V	
C766	1-124-122-11	ELECT 100MF 20% 35V	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L751	1-408-413-00	INDUCTOR 22UH	
L752	1-408-421-00	INDUCTOR 100UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q751	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q752	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q753	8-729-140-96	TRANSISTOR 2SD774-34	
Q754	8-729-177-22	TRANSISTOR 2SB772-Q	
Q755	8-729-188-23	TRANSISTOR 2SD882-P	
Q756	8-729-107-26	TRANSISTOR 2SD1585-K	
Q757	8-729-119-78	TRANSISTOR 2SC2785-HFE	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R711	1-249-423-11	CARBON 3.3K 5% 1/4W	
R751	1-249-409-11	CARBON 220 5% 1/4W	
R752	1-249-409-11	CARBON 220 5% 1/4W	
R753	1-249-418-11	CARBON 1.2K 5% 1/4W	
R754	1-249-416-11	CARBON 820 5% 1/4W	
R755	1-216-431-11	METAL OXIDE 560 5% 1W	
R756	1-249-414-11	CARBON 560 5% 1/4W	
R757	1-249-426-11	CARBON 5.6K 5% 1/4W	
R758	1-249-435-11	CARBON 33K 5% 1/4W	
R759	1-212-881-11	FUSIBLE 100 5% 1/4W	
R760	1-216-449-11	METAL OXIDE 56 5% 2W	
R764	1-249-409-11	CARBON 220 5% 1/4W	
R765	1-217-637-00	FUSIBLE 1 5% 1/4W	F
R766	1-249-426-11	CARBON 5.6K 5% 1/4W	
R767	1-249-417-11	CARBON 1K 5% 1/4W	
R768	1-249-426-11	CARBON 5.6K 5% 1/4W	
R769	1-249-409-11	CARBON 220 5% 1/4W	
R772	1-212-853-00	FUSIBLE 6.8 5% 1/4W	F
R773	1-249-396-11	CARBON 18 5% 1/4W	
R776	1-217-637-00	FUSIBLE 1 5% 1/4W	F

* * *

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1645-009-A	V BOARD, COMPLETE *****************	
	*4-380-698-01	CASE (MAIN), SHIELD, A1	
	*4-380-699-01	CASE (UPPER LID), SHIELD, A1	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C02	1-124-120-11	ELECT 220MF 20% 16V	
C03	1-124-119-00	ELECT 330MF 20% 16V	
C05	1-126-101-11	ELECT 100MF 20% 16V	
C06	1-124-120-11	ELECT 220MF 20% 16V	
C07	1-124-791-11	ELECT 1MF 20% 50V	
C08	1-163-097-00	CERAMIC CHIP 15PF 5% 50V	
C09	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C10	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C11	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C12	1-163-127-00	CERAMIC CHIP 270PF 5% 50V	
C13	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C14	1-163-097-00	CERAMIC CHIP 15PF 5% 50V	
C15	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C16	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C17	1-163-809-11	CERAMIC CHIP 0.047MF 10% 25V	
C18	1-163-099-00	CERAMIC CHIP 18PF 5% 50V	
C19	1-163-809-11	CERAMIC CHIP 0.047MF 10% 25V	
C20	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C21	1-163-833-00	CERAMIC CHIP 0.068MF 25V	
C22	1-102-959-00	CERAMIC 22PF 5% 50V	
C24	1-126-101-11	ELECT 100MF 20% 16V	
C25	1-124-477-11	ELECT 47MF 20% 16V	
C27	1-163-129-00	CERAMIC CHIP 330PF 5% 50V	
C28	1-163-137-00	CERAMIC CHIP 680PF 5% 50V	
C51	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C52	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C53	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C54	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C55	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C56	1-163-038-00	CERAMIC CHIP 0.1MF 25V	

V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
C57	1-124-477-11	ELECT	47MF	20%	16V
C58	1-124-477-11	ELECT	47MF	20%	16V
C59	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C60	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
		<CONNECTOR>			
CNV03	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P			
CNV41	*1-565-393-11	CONNECTOR, BOARD TO BOARD			
CNV42	*1-565-393-11	CONNECTOR, BOARD TO BOARD			
		<TRIMMER>			
CT01	1-141-181-11	CAP,TRIMMER			
		<DIODE>			
D01	8-719-105-91	DIODE RD5.6M-B2			
D02	8-719-106-79	DIODE RD13M-B1			
D03	8-719-400-18	DIODE MA152WK			
D07	8-719-106-17	DIODE RD6.8M-B2			
D08	8-719-106-17	DIODE RD6.8M-B2			
D10	8-719-400-18	DIODE MA152WK			
		<IC>			
IC1	8-759-038-58	IC SDA20162-A002			
IC2	8-759-037-64	IC SDA5231-2			
IC3	8-759-032-98	IC SDA5243			
IC4	8-759-230-69	IC TC5563APL-12L			
		<COIL>			
L01	1-408-411-00	INDUCTOR	15UH		
L04	1-408-407-00	INDUCTOR	6.8UH		
L05	1-408-407-00	INDUCTOR	6.8UH		
L06	1-408-407-00	INDUCTOR	6.8UH		
		<IC LINK>			
PS01	⚠ 1-532-679-91	LINK, IC (ICP-N15) 0.6A			
PS02	⚠ 1-532-727-91	LINK, IC 0.25A			
		<TRANSISTOR>			
Q3	8-729-900-53	TRANSISTOR DTC114EK			
Q01	8-729-920-92	TRANSISTOR 2SD2096-EF			
Q02	8-729-807-50	TRANSISTOR 2SD1623-R			
Q04	8-729-271-22	TRANSISTOR 2SC2712-G			
Q05	8-729-807-50	TRANSISTOR 2SD1623-R			
Q07	8-729-900-98	TRANSISTOR DTC143TK			
Q09	8-729-807-87	TRANSISTOR 2SB1295-UL6			
Q10	8-729-807-87	TRANSISTOR 2SB1295-UL6			
Q11	8-729-807-87	TRANSISTOR 2SB1295-UL6			
Q14	8-729-807-87	TRANSISTOR 2SB1295-UL6			
		<RESISTOR>			
JW19	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW20	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW21	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW22	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW23	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW24	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW25	1-216-295-00	METAL GLAZE	0	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
JW26	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW29	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW30	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW31	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW32	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW33	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW34	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW35	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW42	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW43	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW47	1-216-295-00	METAL GLAZE	0	5%	1/10W
R02	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R05	1-216-025-00	METAL GLAZE	100	5%	1/10W
R06	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R07	1-216-025-00	METAL GLAZE	100	5%	1/10W
R08	1-216-037-00	METAL GLAZE	330	5%	1/10W
R09	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R19	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R20	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R27	1-216-013-00	METAL GLAZE	33	5%	1/10W
R28	1-216-013-00	METAL GLAZE	33	5%	1/10W
R29	1-216-013-00	METAL GLAZE	33	5%	1/10W
R30	1-249-406-11	CARBON	120	5%	1/4W
R31	1-249-406-11	CARBON	120	5%	1/4W
R32	1-249-406-11	CARBON	120	5%	1/4W
R33	1-216-023-00	METAL GLAZE	82	5%	1/10W
R34	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R37	1-216-025-00	METAL GLAZE	100	5%	1/10W
R38	1-216-047-00	METAL GLAZE	820	5%	1/10W
R41	1-216-041-00	METAL GLAZE	470	5%	1/10W
R44	1-216-041-00	METAL GLAZE	470	5%	1/10W
R45	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R46	1-216-311-00	METAL GLAZE	6.8	5%	1/10W
R51	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R52	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R53	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R54	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R55	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R56	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R57	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R58	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R59	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R60	1-216-041-00	METAL GLAZE	470	5%	1/10W
R61	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R64	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R65	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R66	1-216-041-00	METAL GLAZE	470	5%	1/10W
R67	1-216-041-00	METAL GLAZE	470	5%	1/10W
R78	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R79	1-249-410-11	CARBON	270	5%	1/4W
R80	1-249-410-11	CARBON	270	5%	1/4W
		<VARIABLE RESISTOR>			
RV01	1-238-012-11	RES, ADJ, CARBON 1K			
		<CRYSTAL>			
X01	1-567-162-00	OSCILLATOR, CRYSTAL			
X02	1-567-495-11	OSCILLATOR, CRYSTAL			
X03	1-577-364-11	VIBRATOR, CERAMIC			

****

*1-636-575-11 H1 BOARD
****

REF.NO.	PART NO.	DESCRIPTION				REMARK
	1-562-837-11	JACK				
	*1-564-507-11	PLUG, CONNECTOR 4P				
	*1-564-595-11	PLUG, CONNECTOR 14P				
	1-565-639-11	JACK, PIN 1P				
	1-565-641-11	JACK, PIN 1P				
	1-565-666-12	TERMINAL, S 4P				
	1-580-322-11	JACK, PIN (WITH SW)				

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C901	1-101-004-00	CERAMIC	0.01MF		50V	
C902	1-101-004-00	CERAMIC	0.01MF		50V	
C903	1-102-114-00	CERAMIC	470PF	10%	50V	
C904	1-102-114-00	CERAMIC	470PF	10%	50V	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R901	1-249-405-11	CARBON	100	5%	1/4W	
R902	1-249-405-11	CARBON	100	5%	1/4W	

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION				REMARK
S901	1-571-532-21	SWITCH, TACTIL				
S902	1-571-532-21	SWITCH, TACTIL				
S903	1-571-532-21	SWITCH, TACTIL				

* * *

*1-636-576-11 H2 BOARD
****

REF.NO.	PART NO.	DESCRIPTION				REMARK
	*1-564-510-11	PLUG, CONNECTOR 7P				
	*4-201-076-01	HOLDER, LED				
	*4-374-987-01	GUIDE, LIGHT				
	*4-381-686-01	BRACKET (B), LIGHT GUIDE				

<DIODE>

REF.NO.	PART NO.	DESCRIPTION				REMARK
D951	8-719-948-31	DIODE LD-201VR				
D952	8-719-948-31	DIODE LD-201VR				
D954	8-719-948-31	DIODE LD-201VR				

<IC>

REF.NO.	PART NO.	DESCRIPTION				REMARK
IC951	8-741-138-70	IC BX-1387				

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R951	1-249-413-11	CARBON	470	5%	1/4W	

* * *

*A-1649-001-A K BOARD, COMPLETE
****

REF.NO.	PART NO.	DESCRIPTION				REMARK
	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P				
	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P				
	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P				
	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)				
	*1-564-104-00	PIN, CONNECTOR 3P				
	*1-564-507-11	PLUG, CONNECTOR 4P				
	*1-564-508-11	PLUG, CONNECTOR 5P				
	*1-564-509-11	PLUG, CONNECTOR 6P				
	*1-564-510-11	PLUG, CONNECTOR 7P				
	*1-564-515-11	PLUG, CONNECTOR 12P				
	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR				
	*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)				
	4-200-001-01	HOLDER, IC				
	4-201-023-01	SPACER, INSULATING				
	*4-380-699-01	CASE (UPPER LID), SHIELD, A1				
	4-812-134-00	RIVET NYLON, 3.5				

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1002	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1003	1-123-875-11	ELECT	10MF	20%	50V	
C1004	1-124-120-11	ELECT	220MF	20%	16V	
C1005	1-124-791-11	ELECT	1MF	20%	50V	
C1010	1-124-120-11	ELECT	220MF	20%	16V	
C1011	1-101-004-00	CERAMIC	0.01MF		50V	
C1012	1-101-004-00	CERAMIC	0.01MF		50V	
C1013	1-106-220-00	MYLAR	0.1MF	10%	100V	
C1014	1-106-220-00	MYLAR	0.1MF	10%	100V	
C1015	1-124-902-00	ELECT	0.47MF	20%	50V	
C1016	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1017	1-106-220-00	MYLAR	0.1MF	10%	100V	
C1018	1-102-980-00	CERAMIC	270PF	5%	50V	
C1019	1-106-383-00	MYLAR	0.047MF	10%	100V	
C1020	1-124-917-11	ELECT	33MF	20%	50V	
C1021	1-102-973-00	CERAMIC	100PF	5%	50V	
C1022	1-101-004-00	CERAMIC	0.01MF		50V	
C1023	1-102-973-00	CERAMIC	100PF	5%	50V	
C1024	1-102-973-00	CERAMIC	100PF	5%	50V	
C1025	1-102-973-00	CERAMIC	100PF	5%	50V	
C1026	1-124-917-11	ELECT	33MF	20%	50V	
C1027	1-123-875-11	ELECT	10MF	20%	50V	
C1036	1-124-927-11	ELECT	4.7MF	20%	50V	
C1098	1-124-360-00	ELECT	1000MF	20%	16V	
C1099	1-124-360-00	ELECT	1000MF	20%	16V	
C1250	1-123-875-11	ELECT	10MF	20%	50V	
C1251	1-124-925-11	ELECT	2.2MF	20%	50V	
C1252	1-126-233-11	ELECT	22MF	20%	50V	
C1253	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1254	1-106-220-00	MYLAR	0.1MF	10%	100V	
C1255	1-124-637-11	ELECT	1000MF	20%	50V	
C1256	1-124-925-11	ELECT	2.2MF	20%	50V	
C1257	1-124-607-11	ELECT	2200MF	20%	50V	
C1260	1-123-875-11	ELECT	10MF	20%	50V	
C1261	1-124-925-11	ELECT	2.2MF	20%	50V	
C1262	1-126-233-11	ELECT	22MF	20%	50V	
C1263	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1264	1-106-220-00	MYLAR	0.1MF	10%	100V	
C1266	1-124-925-11	ELECT	2.2MF	20%	50V	
C1267	1-124-607-11	ELECT	2200MF	20%	50V	
C1901	1-102-973-00	CERAMIC	100PF	5%	50V	
C1902	1-102-973-00	CERAMIC	100PF	5%	50V	
C1903	1-102-973-00	CERAMIC	100PF	5%	50V	
C1904	1-102-973-00	CERAMIC	100PF	5%	50V	
C1905	1-102-973-00	CERAMIC	100PF	5%	50V	
C1907	1-102-973-00	CERAMIC	100PF	5%	50V	
C1908	1-102-973-00	CERAMIC	100PF	5%	50V	
C1909	1-124-927-11	ELECT	4.7MF	20%	50V	

<FILTER>

REF.NO.	PART NO.	DESCRIPTION				REMARK
CF1001	1-577-364-11	VIBRATOR, CERAMIC				

K

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

<NETWORK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CP1001	1-236-841-11	NETWORK, C	
CP1002	1-236-967-11	NETWORK, RES, THICK FILM	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1001	8-719-911-19	DIODE 1SS119	
D1002	8-719-109-98	DIODE RD6.8ES-B3	
D1003	8-719-911-19	DIODE 1SS119	
D1005	8-719-109-89	DIODE RD5.6ES-B2	
D1006	8-719-109-71	DIODE RD3.9ES-B1	
D1007	1-124-925-11	ELECT 2.2MF 20% 50V	
D1008	8-719-421-09	DIODE MA723	
D1009	8-719-109-89	DIODE RD5.6ES-B2	
D1010	8-719-109-93	DIODE RD6.2ES-B2	
D1011	8-719-109-93	DIODE RD6.2ES-B2	
D1012	8-719-911-19	DIODE 1SS119	
D1013	8-719-911-19	DIODE 1SS119	
D1024	8-719-110-76	DIODE RD33ES-B1	
D1025	8-719-110-54	DIODE RD20ES-B3	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1001	8-759-512-68	IC SDA20560A-007	
IC1003	8-759-945-58	IC RC4558P	
IC1004	8-759-208-06	IC TC4051BPHB	
IC1005	8-759-748-56	IC SDA2546	
IC1006	8-759-208-06	IC TC4051BPHB	
IC1007	8-759-208-10	IC TC4053BPHB	
IC1099	8-759-502-23	IC L78S05CV	
IC1251	8-759-988-94	IC TDA2050	
IC1261	8-759-988-94	IC TDA2050	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L1099	1-410-397-21	FERRITE BEAD INDUCTOR	

<IC LINK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
PS1099⚠	1-532-984-91	LINK, IC (ICP-N50) 2A	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1001	8-729-900-89	TRANSISTOR DTC144ES	
Q1002	8-729-900-89	TRANSISTOR DTC144ES	
Q1003	8-729-173-38	TRANSISTOR 2SA733-K	
Q1004	8-729-173-38	TRANSISTOR 2SA733-K	
Q1005	8-729-900-89	TRANSISTOR DTC144ES	
Q1006	8-729-900-89	TRANSISTOR DTC144ES	
Q1007	8-729-900-89	TRANSISTOR DTC144ES	
Q1008	8-729-900-89	TRANSISTOR DTC144ES	
Q1009	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1010	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1060	8-729-900-89	TRANSISTOR DTC144ES	
Q1061	8-729-900-89	TRANSISTOR DTC144ES	
Q1251	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1261	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1901	8-729-173-38	TRANSISTOR 2SA733-K	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1001	1-249-413-11	CARBON 470 5% 1/4W	
R1002	1-249-413-11	CARBON 470 5% 1/4W	
R1004	1-249-417-11	CARBON 1K 5% 1/4W	
R1005	1-249-417-11	CARBON 1K 5% 1/4W	
R1006	1-249-429-11	CARBON 10K 5% 1/4W	
R1007	1-249-425-11	CARBON 4.7K 5% 1/4W	
R1008	1-249-429-11	CARBON 10K 5% 1/4W	
R1009	1-249-429-11	CARBON 10K 5% 1/4W	
R1010	1-249-413-11	CARBON 470 5% 1/4W	
R1011	1-249-425-11	CARBON 4.7K 5% 1/4W	
R1012	1-249-429-11	CARBON 10K 5% 1/4W	
R1013	1-249-429-11	CARBON 10K 5% 1/4W	
R1014	1-249-435-11	CARBON 33K 5% 1/4W	
R1015	1-249-423-11	CARBON 3.3K 5% 1/4W	
R1016	1-249-435-11	CARBON 33K 5% 1/4W	
R1017	1-249-436-11	CARBON 39K 5% 1/4W	
R1018	1-249-440-11	CARBON 82K 5% 1/4W	
R1019	1-249-405-11	CARBON 100 5% 1/4W	
R1020	1-249-405-11	CARBON 100 5% 1/4W	
R1021	1-249-425-11	CARBON 4.7K 5% 1/4W	
R1022	1-249-429-11	CARBON 10K 5% 1/4W	
R1023	1-249-433-11	CARBON 22K 5% 1/4W	
R1024	1-215-924-00	METAL OXIDE 15K 5% 3W	F
R1025	1-249-405-11	CARBON 100 5% 1/4W	
R1026	1-249-417-11	CARBON 1K 5% 1/4W	
R1027	1-249-405-11	CARBON 100 5% 1/4W	
R1028	1-249-405-11	CARBON 100 5% 1/4W	
R1029	1-249-429-11	CARBON 10K 5% 1/4W	
R1030	1-249-429-11	CARBON 10K 5% 1/4W	
R1031	1-249-433-11	CARBON 22K 5% 1/4W	
R1032	1-249-429-11	CARBON 10K 5% 1/4W	
R1033	1-249-429-11	CARBON 10K 5% 1/4W	
R1034	1-249-431-11	CARBON 15K 5% 1/4W	
R1035	1-249-433-11	CARBON 22K 5% 1/4W	
R1036	1-249-434-11	CARBON 27K 5% 1/4W	
R1037	1-249-427-11	CARBON 6.8K 5% 1/4W	
R1038	1-249-427-11	CARBON 6.8K 5% 1/4W	
R1039	1-249-433-11	CARBON 22K 5% 1/4W	
R1040	1-249-431-11	CARBON 15K 5% 1/4W	
R1041	1-249-429-11	CARBON 10K 5% 1/4W	
R1042	1-249-417-11	CARBON 1K 5% 1/4W	
R1043	1-249-413-11	CARBON 470 5% 1/4W	
R1044	1-249-441-11	CARBON 100K 5% 1/4W	
R1045	1-249-423-11	CARBON 3.3K 5% 1/4W	
R1046	1-249-440-11	CARBON 82K 5% 1/4W	
R1047	1-249-429-11	CARBON 10K 5% 1/4W	
R1048	1-249-429-11	CARBON 10K 5% 1/4W	
R1049	1-249-429-11	CARBON 10K 5% 1/4W	
R1050	1-249-426-11	CARBON 5.6K 5% 1/4W	
R1051	1-249-413-11	CARBON 470 5% 1/4W	
R1052	1-249-417-11	CARBON 1K 5% 1/4W	
R1053	1-249-417-11	CARBON 1K 5% 1/4W	
R1054	1-249-417-11	CARBON 1K 5% 1/4W	
R1055	1-249-411-11	CARBON 330 5% 1/4W	
R1056	1-249-417-11	CARBON 1K 5% 1/4W	
R1057	1-249-417-11	CARBON 1K 5% 1/4W	
R1058	1-249-424-11	CARBON 3.9K 5% 1/4W	
R1059	1-249-417-11	CARBON 1K 5% 1/4W	
R1060	1-249-417-11	CARBON 1K 5% 1/4W	
R1061	1-249-417-11	CARBON 1K 5% 1/4W	
R1062	1-249-429-11	CARBON 10K 5% 1/4W	
R1063	1-249-417-11	CARBON 1K 5% 1/4W	
R1064	1-249-413-11	CARBON 470 5% 1/4W	
R1065	1-249-417-11	CARBON 1K 5% 1/4W	
R1066	1-249-413-11	CARBON 470 5% 1/4W	
R1067	1-249-413-11	CARBON 470 5% 1/4W	
R1068	1-249-405-11	CARBON 100 5% 1/4W	
R1069	1-249-405-11	CARBON 100 5% 1/4W	
R1070	1-249-417-11	CARBON 1K 5% 1/4W	
R1071	1-249-417-11	CARBON 1K 5% 1/4W	
R1072	1-249-417-11	CARBON 1K 5% 1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1073	1-249-417-11	CARBON	1K	5%	1/4W	
R1074	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1075	1-249-409-11	CARBON	220	5%	1/4W	
R1076	1-249-429-11	CARBON	10K	5%	1/4W	
R1077	1-249-417-11	CARBON	1K	5%	1/4W	
R1081	1-249-417-11	CARBON	1K	5%	1/4W	
R1082	1-249-429-11	CARBON	10K	5%	1/4W	
R1083	1-249-429-11	CARBON	10K	5%	1/4W	
R1084	1-249-429-11	CARBON	10K	5%	1/4W	
R1085	1-249-429-11	CARBON	10K	5%	1/4W	
R1086	1-249-429-11	CARBON	10K	5%	1/4W	
R1087	1-249-429-11	CARBON	10K	5%	1/4W	
R1093	1-249-429-11	CARBON	10K	5%	1/4W	
R1094	1-249-429-11	CARBON	10K	5%	1/4W	
R1098	1-249-417-11	CARBON	1K	5%	1/4W	
R1099	1-249-417-11	CARBON	1K	5%	1/4W	
R1250	1-215-924-00	METAL OXIDE	15K	5%	3W	F
R1251	1-249-441-11	CARBON	100K	5%	1/4W	
R1252	1-249-412-11	CARBON	390	5%	1/4W	
R1253	1-249-429-11	CARBON	10K	5%	1/4W	
R1254	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R1255	1-249-429-11	CARBON	10K	5%	1/4W	
R1257	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1258	1-215-869-11	METAL OXIDE	1K	5%	1W	
R1259	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1261	1-249-441-11	CARBON	100K	5%	1/4W	
R1262	1-249-412-11	CARBON	390	5%	1/4W	
R1263	1-249-429-11	CARBON	10K	5%	1/4W	
R1264	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R1265	1-249-429-11	CARBON	10K	5%	1/4W	
R1266	1-249-441-11	CARBON	100K	5%	1/4W	
R1267	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1268	1-215-869-11	METAL OXIDE	1K	5%	1W	
R1269	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1274	1-249-441-11	CARBON	100K	5%	1/4W	
R1275	1-249-439-11	CARBON	68K	5%	1/4W	
R1276	1-249-435-11	CARBON	33K	5%	1/4W	
R1284	1-249-441-11	CARBON	100K	5%	1/4W	
R1285	1-249-439-11	CARBON	68K	5%	1/4W	
R1286	1-249-435-11	CARBON	33K	5%	1/4W	
R1901	1-249-429-11	CARBON	10K	5%	1/4W	
R1902	1-249-429-11	CARBON	10K	5%	1/4W	
R1904	1-249-429-11	CARBON	10K	5%	1/4W	
R1907	1-249-429-11	CARBON	10K	5%	1/4W	
R1908	1-249-429-11	CARBON	10K	5%	1/4W	
R1909	1-249-429-11	CARBON	10K	5%	1/4W	
R1910	1-249-429-11	CARBON	10K	5%	1/4W	
R1911	1-249-429-11	CARBON	10K	5%	1/4W	
R1912	1-249-429-11	CARBON	10K	5%	1/4W	
R1913	1-249-417-11	CARBON	1K	5%	1/4W	
R1920	1-249-411-11	CARBON	330	5%	1/4W	
R1921	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1922	1-249-428-11	CARBON	8.2K	5%	1/4W	

****

REF.NO.	PART NO.	DESCRIPTION
	*A-1651-013-A	J BOARD, COMPLETE *****************
	1-536-996-21	TERMINAL BOARD, INPUT/OUTPUT
	*1-560-278-00	PLUG, CONNECTOR 3P
	1-561-534-41	SOCKET 21P
	*1-564-505-11	PLUG, CONNECTOR 2P
	*1-564-519-11	PLUG, CONNECTOR 4P
	*1-564-593-11	PLUG, CONNECTOR 14P
	1-565-931-11	TERMINAL BLOCK, S 3P
	*1-566-641-11	CONNECTOR, HINGE (TAB) 18P

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C201	1-126-103-11	ELECT	470MF	20%	16V	
C203	1-124-925-11	ELECT	2.2MF	20%	50V	
C205	1-124-927-11	ELECT	4.7MF	20%	50V	
C206	1-124-925-11	ELECT	2.2MF	20%	50V	
C207	1-124-927-11	ELECT	4.7MF	20%	50V	
C209	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V	
C210	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V	
C213	1-126-233-11	ELECT	22MF	20%	50V	
C214	1-106-363-00	MYLAR	0.0068MF	10%	400V	
C217	1-106-363-00	MYLAR	0.0068MF	10%	400V	
C218	1-106-375-12	MYLAR	0.022MF	10%	250V	
C219	1-106-375-12	MYLAR	0.022MF	10%	250V	
C220	1-108-686-11	MYLAR	0.0033MF	10%	100V	
C221	1-108-686-11	MYLAR	0.0033MF	10%	100V	
C222	1-106-385-00	MYLAR	0.056MF	10%	100V	
C223	1-106-385-00	MYLAR	0.056MF	10%	100V	
C224	1-106-367-00	MYLAR	0.01MF	10%	400V	
C225	1-136-173-00	FILM	0.47MF	5%	50V	
C226	1-136-173-00	FILM	0.47MF	5%	50V	
C227	1-106-375-12	MYLAR	0.022MF	10%	250V	
C228	1-106-379-12	MYLAR	0.033MF	10%	250V	
C229	1-106-371-00	MYLAR	0.015MF	10%	400V	
C230	1-106-371-00	MYLAR	0.015MF	10%	400V	
C231	1-124-902-00	ELECT	0.47MF	20%	50V	
C232	1-123-875-11	ELECT	10MF	20%	50V	
C233	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C234	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C235	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C236	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C237	1-124-902-00	ELECT	0.47MF	20%	50V	
C238	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C239	1-126-103-11	ELECT	470MF	20%	16V	
C240	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C241	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C242	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C243	1-106-228-00	MYLAR	0.22MF	10%	100V	
C244	1-106-228-00	MYLAR	0.22MF	10%	100V	
C245	1-106-228-00	MYLAR	0.22MF	10%	100V	
C246	1-106-228-00	MYLAR	0.22MF	10%	100V	
C247	1-124-902-00	ELECT	0.47MF	20%	50V	
C248	1-124-902-00	ELECT	0.47MF	20%	50V	
C249	1-124-902-00	ELECT	0.47MF	20%	50V	
C250	1-124-925-11	ELECT	2.2MF	20%	50V	
C251	1-124-925-11	ELECT	2.2MF	20%	50V	
C252	1-106-375-12	MYLAR	0.022MF	10%	250V	
C253	1-106-375-12	MYLAR	0.022MF	10%	250V	
C254	1-124-925-11	ELECT	2.2MF	20%	50V	
C255	1-124-925-11	ELECT	2.2MF	20%	50V	
C256	1-106-371-00	MYLAR	0.015MF	10%	400V	
C257	1-106-371-00	MYLAR	0.015MF	10%	400V	
C258	1-106-220-00	MYLAR	0.1MF	10%	100V	
C259	1-106-220-00	MYLAR	0.1MF	10%	100V	
C260	1-123-875-11	ELECT	10MF	20%	50V	
C261	1-123-875-11	ELECT	10MF	20%	50V	
C262	1-126-103-11	ELECT	470MF	20%	16V	
C263	1-126-103-11	ELECT	470MF	20%	16V	
C265	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V	
C266	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V	
C267	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V	
C268	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V	

J

REF.NO.	PART NO.	DESCRIPTION			REMARK
C269	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C270	1-106-216-00	MYLAR	0.068MF	10%	100V
C271	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C272	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C273	1-102-961-00	CERAMIC	27PF	5%	50V
C280	1-106-375-12	MYLAR	0.022MF	10%	250V
C281	1-106-375-12	MYLAR	0.022MF	10%	250V
C282	1-102-114-00	CERAMIC	470PF	10%	50V
C1401	1-124-120-11	ELECT	220MF	20%	16V
C1402	1-126-103-11	ELECT	470MF	20%	16V
C1403	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C1404	1-106-220-00	MYLAR	0.1MF	10%	100V
C1405	1-136-017-00	CERAMIC CHIP	0.0047MF		50V
C1406	1-106-220-00	MYLAR	0.1MF	10%	100V
C1407	1-124-910-11	ELECT	47MF	20%	50V
C1408	1-124-122-11	ELECT	100MF	20%	50V
C1409	1-126-233-11	ELECT	22MF	20%	50V
C1410	1-123-875-11	ELECT	10MF	20%	50V
C1411	1-123-875-11	ELECT	10MF	20%	50V
C1412	1-124-910-11	ELECT	47MF	20%	50V
C1413	1-124-910-11	ELECT	47MF	20%	50V
C1414	1-123-875-11	ELECT	10MF	20%	50V
C1415	1-106-220-00	MYLAR	0.1MF	10%	100V
C1416	1-106-220-00	MYLAR	0.1MF	10%	100V
C1417	1-124-120-11	ELECT	220MF	20%	16V
C1418	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C1419	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C1425	1-124-902-00	ELECT	0.47MF	20%	50V
C1426	1-124-902-00	ELECT	0.47MF	20%	50V
C1427	1-136-017-00	CERAMIC CHIP	0.0047MF		50V
C1428	1-136-017-00	CERAMIC CHIP	0.0047MF		50V
C1429	1-136-017-00	CERAMIC CHIP	0.0047MF		50V
C1430	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C1431	1-126-529-11	ELECT	0.47MF	20%	50V
C1432	1-124-902-00	ELECT	0.47MF	20%	50V
C1433	1-124-122-11	ELECT	100MF	20%	50V
C1439	1-106-367-00	MYLAR	0.01MF	10%	400V
C1444	1-124-910-11	ELECT	47MF	20%	50V
C1801	1-124-790-11	ELECT	0.47MF	20%	100V
C1802	1-124-790-11	ELECT	0.47MF	20%	100V
C1803	1-124-790-11	ELECT	0.47MF	20%	100V
C1804	1-124-790-11	ELECT	0.47MF	20%	100V
C1807	1-106-220-00	MYLAR	0.1MF	10%	100V
C1808	1-124-910-11	ELECT	47MF	20%	50V
C1809	1-124-910-11	ELECT	47MF	20%	50V
C1810	1-124-477-11	ELECT	47MF	20%	16V
C1811	1-106-367-00	MYLAR	0.01MF	10%	400V
C1812	1-126-101-11	ELECT	100MF	20%	16V
C1813	1-124-477-11	ELECT	47MF	20%	16V
C1814	1-106-367-00	MYLAR	0.01MF	10%	400V
C1816	1-126-101-11	ELECT	100MF	20%	16V
C1817	1-124-910-11	ELECT	47MF	20%	50V
C1818	1-124-910-11	ELECT	47MF	20%	50V
C1820	1-124-910-11	ELECT	47MF	20%	50V

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D201	8-719-110-14	DIODE RD9.1ES-B3	
D202	8-719-110-14	DIODE RD9.1ES-B3	
D205	8-719-110-04	DIODE RD7.5ES-B3	
D206	8-719-110-04	DIODE RD7.5ES-B3	
D208	8-719-110-04	DIODE RD7.5ES-B3	
D209	8-719-110-04	DIODE RD7.5ES-B3	
D210	8-719-110-04	DIODE RD7.5ES-B3	
D212	8-719-110-04	DIODE RD7.5ES-B3	
D1401	8-719-110-04	DIODE RD7.5ES-B3	
D1403	8-719-110-04	DIODE RD7.5ES-B3	
D1404	8-719-110-04	DIODE RD7.5ES-B3	
D1405	8-719-110-04	DIODE RD7.5ES-B3	
D1406	8-719-110-04	DIODE RD7.5ES-B3	
D1407	8-719-110-18	DIODE RD10ES-B3	
D1408	8-719-110-14	DIODE RD9.1ES-B3	
D1409	8-719-110-14	DIODE RD9.1ES-B3	
D1410	8-719-110-14	DIODE RD9.1ES-B3	
D1415	8-719-110-04	DIODE RD7.5ES-B3	
D1418	8-719-110-04	DIODE RD7.5ES-B3	
D1419	8-719-110-04	DIODE RD7.5ES-B3	
D1420	8-719-110-04	DIODE RD7.5ES-B3	
D1426	8-719-110-04	DIODE RD7.5ES-B3	
D1801	8-719-110-04	DIODE RD7.5ES-B3	
D1802	8-719-110-04	DIODE RD7.5ES-B3	
D1803	8-719-110-04	DIODE RD7.5ES-B3	
D1804	8-719-110-04	DIODE RD7.5ES-B3	
D1805	8-719-110-04	DIODE RD7.5ES-B3	
D1806	8-719-110-04	DIODE RD7.5ES-B3	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC201	8-759-013-17	IC TDA6200	
IC202	8-759-208-08	IC TC4052BPHB	
IC203	8-759-502-22	IC TDA7303	
IC204	8-759-502-21	IC TDA2822M	
IC1401	8-752-032-27	IC CXA1114P	
IC1402	8-759-946-32	IC TEA2014A	
IC1403	8-759-040-53	IC MC14053BCP	
IC1404	8-759-998-02	IC TEA5114A	
IC1405	8-759-208-08	IC TC4052BPHB	

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L201	1-408-427-00	INDUCTOR	330UH	
L1801	1-408-409-00	INDUCTOR	10UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q201	8-729-271-22	TRANSISTOR 2SC2712-G	
Q202	8-729-271-22	TRANSISTOR 2SC2712-G	
Q1401	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1402	8-729-271-22	TRANSISTOR 2SC2712-G	
Q1403	8-729-271-22	TRANSISTOR 2SC2712-G	
Q1404	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1406	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1407	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1408	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1409	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1410	8-729-271-22	TRANSISTOR 2SC2712-G	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
JW88	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW89	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW90	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW92	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW93	1-216-295-00	METAL GLAZE	0	5%	1/10W
JW102	1-216-041-00	METAL GLAZE	470	5%	1/10W
JW123	1-216-295-00	METAL GLAZE	0	5%	1/10W
R202	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R203	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R204	1-216-085-00	METAL GLAZE	33K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION				REMARK
R205	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R206	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R207	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R208	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R209	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R210	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R211	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R212	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R213	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R214	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R215	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R216	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R217	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R218	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R219	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R220	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R221	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R222	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R223	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R224	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R225	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R226	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R227	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R228	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R229	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R231	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R232	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R233	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R234	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R235	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R236	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R237	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R238	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R239	1-247-688-11	CARBON	10	5%	1/4W	F
R240	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R241	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R242	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R243	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R244	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R245	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R246	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R247	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R248	1-216-246-00	METAL GLAZE	100K	5%	1/8W	
R250	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R251	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R252	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R253	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R254	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R255	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R256	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R257	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R258	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R259	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R260	1-247-734-11	CARBON	39	5%	1/2W	
R261	1-247-734-11	CARBON	39	5%	1/2W	
R262	1-217-637-00	FUSIBLE	1	5%	1/4W	F
R270	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R271	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R272	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R273	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R274	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R275	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R276	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R277	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1401	1-216-180-00	METAL GLAZE	180	5%	1/8W	
R1402	1-216-170-00	METAL GLAZE	68	5%	1/8W	
R1403	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1404	1-216-178-00	METAL GLAZE	150	5%	1/8W	
R1405	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1407	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1408	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1410	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1411	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1412	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1413	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1414	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1415	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1416	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1417	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R1418	1-247-738-11	CARBON	82	5%	1/2W	F
R1422	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1423	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1424	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1425	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1426	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1427	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1428	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1429	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1430	1-216-170-00	METAL GLAZE	68	5%	1/8W	
R1431	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1432	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1433	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1434	1-247-688-11	CARBON	10	5%	1/4W	F
R1435	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1436	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R1437	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1439	1-216-180-00	METAL GLAZE	180	5%	1/8W	
R1440	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1441	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1442	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1443	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1444	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1445	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R1446	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1447	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1448	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1452	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1453	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1454	1-216-180-00	METAL GLAZE	180	5%	1/8W	
R1455	1-216-180-00	METAL GLAZE	180	5%	1/8W	
R1457	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1459	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1460	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1461	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1462	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1463	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1464	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1467	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1468	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1469	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1470	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1482	1-216-178-00	METAL GLAZE	150	5%	1/8W	
R1483	1-216-178-00	METAL GLAZE	150	5%	1/8W	
R1484	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1485	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1486	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1487	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1488	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1489	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1801	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R1802	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R1803	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R1804	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R1805	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R1806	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R1807	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1808	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1809	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1810	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1811	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1812	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R1813	1-216-186-00	METAL GLAZE	330	5%	1/8W	
R1814	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1815	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1816	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1817	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1818	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1819	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1820	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1821	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1822	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1823	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1824	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1825	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1826	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R1827	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R1828	1-216-186-00	METAL GLAZE	330	5%	1/8W	
R1829	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1831	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

<SWITCH>

S1801	1-570-145-11	SWITCH, SLIDE

****

⚠ 1-413-583-11 G BOARD (ZD-113)
****

<CAPACITOR>

C601	1-136-721-21	FILM	1.5MF	10%	400V
C602	1-136-725-11	FILM	0.039MF	5%	1.25KV
C603	1-136-725-11	FILM	0.039MF	5%	1.25KV
C604	1-130-325-11	FILM	0.15MF	5%	100V
C605	1-130-325-11	FILM	0.15MF	5%	100V
C606	1-164-143-11	CERAMIC	1000PF	10%	1KV
C607	1-164-143-11	CERAMIC	1000PF	10%	1KV
C608	1-164-143-11	CERAMIC	1000PF	10%	1KV
C609	1-164-144-11	CERAMIC	1500PF	10%	1KV
C610	1-164-143-11	CERAMIC	1000PF	10%	1KV
C611	1-102-038-00	CERAMIC	1000PF		500V
C612	1-108-843-11	MYLAR	0.033MF	10%	50V
C613	1-124-477-11	ELECT	47MF	20%	16V
C614	1-126-176-11	ELECT	220MF	20%	6.3V
C615	1-123-380-00	ELECT	1MF	20%	50V
C616	1-124-557-11	ELECT	1000MF	20%	25V
C618	1-124-439-11	ELECT	2700MF	20%	25V
C619	1-124-557-11	ELECT	1000MF	20%	25V
C620	1-124-568-00	ELECT	4700MF	20%	10V
C621	1-124-347-00	ELECT	100MF	20%	160V
C622	1-130-495-00	MYLAR	0.1MF	10%	50V
C624	1-124-471-00	ELECT	1000MF	20%	6.3V

<DIODE>

D601	8-719-500-69	DIODE S3V10SS
D602	8-719-500-69	DIODE S3V10SS
D603	8-719-500-26	DIODE D5KD20H
D605	8-719-510-13	DIODE D10SC4MR
D606	8-719-510-12	DIODE D10SC4M
D607	8-719-300-33	DIODE RU-3AM
D608	8-719-300-33	DIODE RU-3AM
D609	8-719-500-67	DIODE D5KC40H
D610	8-719-911-19	DIODE 1SS119
D611	8-719-911-19	DIODE 1SS119
D612	8-719-911-19	DIODE 1SS119
D613	8-719-911-19	DIODE 1SS119
D615	8-719-801-95	DIODE 2GWJ42
D616	8-719-911-55	DIODE U05G
D617	8-719-110-50	DIODE RD18ES-B3

<CONNECTOR>

G1	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
G2	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P
G3	*1-564-507-11	PLUG, CONNECTOR 4P
G4	*1-564-506-11	PLUG, CONNECTOR 3P

<MODULE>

IC601	1-236-237-11	POWER MODULE (DM-38)

<COIL>

L603	1-408-300-00	INDUCTOR	6.80UH
L604	1-421-329-00	COIL, CHOKE	
L605	1-410-397-21	FERRITE BEAD INDUCTOR	1.10UH
L606	1-410-397-21	FERRITE BEAD INDUCTOR	1.10UH
L607	1-410-397-21	FERRITE BEAD INDUCTOR	1.10UH
L609	1-410-396-41	FERRITE BEAD INDUCTOR	0.45UH
L610	1-410-396-41	FERRITE BEAD INDUCTOR	0.45UH
L613	1-410-397-21	FERRITE BEAD INDUCTOR	1.10UH
L615	1-459-155-00	COIL (WITH CORE) 45UH	
L616	1-421-329-00	COIL, CHOKE	
L617	1-421-329-00	COIL, CHOKE	
L618	1-459-155-00	COIL (WITH CORE) 45UH	

<TRANSISTOR>

Q601	8-729-905-72	TRANSISTOR 2SC4056P
Q602	8-729-905-72	TRANSISTOR 2SC4056P
Q603	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q604	8-729-119-78	TRANSISTOR 2SC2785-HFE

<RESISTOR>

R601	1-215-904-11	METAL OXIDE	100K	5%	2W	F
R602	1-215-904-11	METAL OXIDE	100K	5%	2W	F
R605	1-207-451-00	WIREWOUND	0.1	10%	1/2W	
R606	1-207-451-00	WIREWOUND	0.1	10%	1/2W	
R607	1-216-370-11	METAL OXIDE	1.2	5%	2W	F
R608	1-216-370-11	METAL OXIDE	1.2	5%	2W	F
R609	1-249-405-11	CARBON	100	5%	1/4W	F
R610	1-249-405-11	CARBON	100	5%	1/4W	F
R611	1-249-417-11	CARBON	1K	5%	1/4W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
R612	1-249-382-11	CARBON 1.2 5% 1/4W	F
R613	1-249-398-11	CARBON 27 5% 1/4W	F
R614	1-249-405-11	CARBON 100 5% 1/4W	F
R615	1-216-363-00	METAL OXIDE 0.33 5% 2W	F
R616	1-216-363-00	METAL OXIDE 0.33 5% 2W	F
R617	1-216-343-00	WIREWOUND 0.33 10% 1/2W	
R618	1-207-451-00	WIREWOUND 0.1 10% 1/2W	
R619	1-249-417-11	CARBON 1K 5% 1/4W	
R620	1-249-407-11	CARBON 150 5% 1/4W	F
R621	1-249-405-11	CARBON 100 5% 1/4W	F
R622	1-207-451-00	WIREWOUND 0.1 10% 1/2W	
R623	1-216-341-11	WIREWOUND 0.22 10% 1/2W	
		<TRANSFORMER>	
T601	1-424-023-11	TRANSFORMER, LINE FILTER	
T602 ⚠	1-424-147-11	TRANSFORMER, POWER REGULATION	
T603 ⚠	1-450-273-11	TRANSFORMER, POWER INSULATED	

****

MISCELLANEOUS
****

REF.NO.	PART NO.	DESCRIPTION	REMARK
⚠	1-237-614-12	RESISTOR ASSY, HIGH-VOLTAGE	
⚠	1-417-175-12	RF SPLITTER	
⚠	1-426-433-21	COIL, DEMAGNETIZATION	
⚠	1-451-315-11	DEFLECTION YOKE (Y34FXA)	
	1-452-032-00	MAGNET, DISK; 10MM ϕ	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
⚠	1-452-468-11	NECK ASSY, PICTURE TUBE (NA321)	
	1-543-619-11	CORE, RING	
	*1-558-539-21	CABLE, P-P	
⚠	1-563-204-13	SOCKET, ANTENNA (PAL/SECAM)	
⚠	1-575-487-11	CORD, POWER (WITH NOISE FILTER)	
	1-590-127-11	CABLE, PIN	
V901 ⚠	8-733-723-05	PICTURE TUBE (A80JYV50X)	

****

ACCESSORIES AND PACKING MATERIALS
****

PART NO.	DESCRIPTION	REMARK
*A-1678-023-A	BOX ASSY (RIGHT), SPEAKER	
*A-1678-024-A	BOX ASSY (LEFT), SPEAKER	
A-1678-025-A	BOX COMPLETE ASSY, WOOFER	
X-4200-058-1	CUSHION ASSY, FRONT	
X-4200-060-1	SPACER ASSY, SIDE(R)	
X-4200-061-1	SPACER ASSY, SIDE(L)	
X-4374-104-1	SCREW (B) ASSY, ORNAMENTAL	
1-465-618-11	REMOTE COMMANDER (RM-811)	
*3-704-280-01	BAG, PROTECTION (STANDARD)	
*3-704-283-01	BAG (STANDARD), PROTECTION	
*4-200-451-01	CUSHION (UPPER) (ASSY)	
*4-200-452-01	CUSHION (LOWER)	
*4-200-453-01	INDIVIDUAL CARTON	
*4-200-454-01	PALLET	
*4-200-456-01	TRAY	
4-200-458-11	MANUAL, INSTRUCTION (ENGLISH/FRENCH/ GERMAN/DUTCH/PORTUGUESE)	
*4-388-135-01	BAG, PROTECTION	
*4-396-077-01	JOINT	

MEMO

ACCESSORY

RM-811

SPECIFICATIONS

Remote control system	infrared control
Power requirements	3 V dc 2 batteries IEC designation R 6 (size AA)
Dimentions	Approx. 98×36×171.1 mm
Weight	Approx. 225 g (8 oz) including batteries

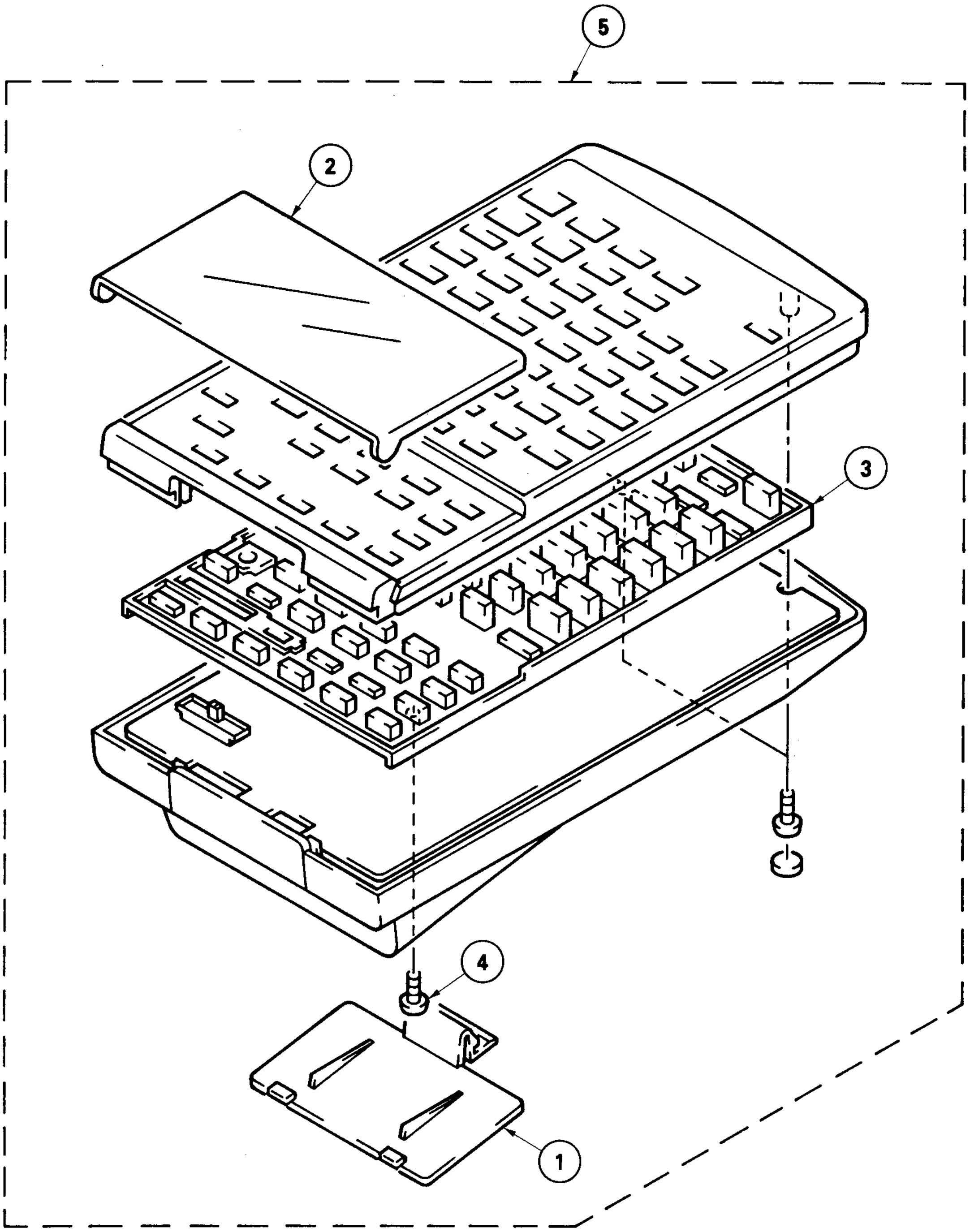
Design and specifications subject to change without notice.

REMOTE COMMANDER

SONY®

EXPLODED VIEW

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	9-997-963-01	COVER, BATTERY	
2	9-997-964-01	COVER	
3	9-997-965-01	SWITCH RUBBER	
4	9-997-966-01	SCREW-TAPPING M2X8	
5	1-465-618-11	COMMANDER, REMOTE (RM-811)	1-4

English
90JJ0228-1
Printed in Japan
©1990.10

Sony Corporation
TV Group